

```
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
chain bonds :
2-17 14-18
ring bonds :
1-2 1-6 1-10 2-3 3-4 4-5 5-6 5-11 6-7 7-8 7-13 8-9 8-16 9-10 11-12 12-13 13-14 14-15 15-16 17-19 17-23 18-24 18-28 19-20 20-21 21-22 22-23 24-25 25-26 26-27 27-28
exact bonds :
2-17 14-18
normalized bonds :
1-2 1-6 1-10 2-3 3-4 4-5 5-6 5-11 6-7 7-8 7-13 8-9 8-16 9-10 11-12 12-13 13-14 14-15 15-16 17-19 17-23 18-24 18-28 19-20 20-21 21-22 22-23 24-25 25-26 26-27 27-28
isolated ring systems :
containing 1 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom
23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
```

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L1          STRUCTURE UPLOADED

=> s l1 sss full
FULL SEARCH INITIATED 10:52:14 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 69792 TO ITERATE

100.0% PROCESSED 69792 ITERATIONS 951 ANSWERS
SEARCH TIME: 00.00.01

L2          951 SEA SSS FUL L1

=> s l2
L3          268 L2

=> l3 and (electroluminescent or electroluminescence or (light emitting) or (light emission) or oled)
107568 ELECTROLUMINESCENT
8 ELECTROLUMINESCENTS
107571 ELECTROLUMINESCENT
(ELECTROLUMINESCENT OR ELECTROLUMINESCENTS)
29473 ELECTROLUMINESCENCE
29 ELECTROLUMINESCENCES
29477 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
5 ELECTROLUMINESCENSE
29478 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENSE)
1450825 LIGHT
14358 LIGHTS
1455624 LIGHT
(LIGHT OR LIGHTS)
164916 EMITTING
286 EMITTINGS
164978 EMITTING
OR (EMITTING OR EMITTINGS)
93905 LIGHT EMITTING
(LIGHT(W)EMITTING)
1450825 LIGHT
14358 LIGHTS
1455624 LIGHT
(LIGHT OR LIGHTS)
657868 EMISSION
125408 EMISSIONS
718035 EMISSION
(EMISSION OR EMISSIONS)
19021 LIGHT EMISSION
(LIGHT(W)EMISSION)
9419 OLED
4663 OLEDs
11744 OLED
(OLED OR OLEDs)
L4          193 L3 AND (ELECTROLUMINESCENT OR ELECTROLUMINESCENCE OR (LIGHT EMITTING) OR (LIGHT EMISSION) OR OLED)

=> l4 and (py<=2005 or ay<=2005)
26345038 PY<=2005
5579205 AY<=2005
L5          59 L4 AND (PY<=2005 OR AY<=2005)

=> d ibib abs hitstr l-
YOU HAVE REQUESTED DATA FROM 59 ANSWERS - CONTINUE? Y/(N):y
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L5 ANSWER 1 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN  
Accession Number 2011:313523 CAPLUS [Full text](#)  
Document Number 154:349467

Title Organic electroluminescence devices  
Author/Inventor Kawamura, Hisayuki; Kubota, Mineyuki; Funabashi, Masakazu  
Patent Assignee/Corporate Source Idemitsu Kosan Co., Ltd., Japan  
Source Jpn. Tokkyo Koho, 44pp. CODEN: JTXXFF  
Document Type Patent  
Language Japanese  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4653469	B2	20110316	JP 2004-348675	20041201
JP 2006156888	A	20060615		

WO 2006059512	A1	20060608	WO 2005-JP21469	20051122
CN 101069299	A	20071107	CN 2005-80041191	20051122
CN 100565964	C	20091202		
US 20060158102	A1	20060720	US 2005-288281	20051129
US 7528542	B2	20090505		
KR 2007091280	A	20070910	KR 2007-7012284	20070531
JP 2010283384	A	20101216	JP 2010-198577	20100906

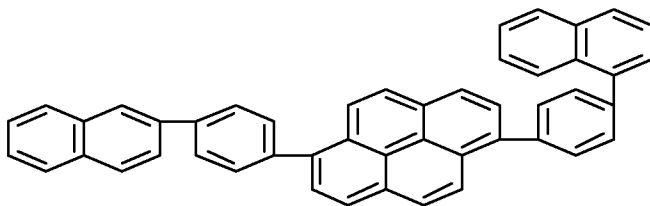
#### Abstract

Disclosed is an organic **electroluminescent** device comprising at least an anode, a cathode and an organic **light-emitting** layer interposed between the electrodes, wherein the organic **light-emitting** layer contains  $\geq 1$  host materials, a hole-trapping dopant and an electron-trapping dopant. By having the hole-trapping dopant and the electron-trapping dopant coexist in the organic **light-emitting** layer, the organic **electroluminescent** device can have a longer life.

#### Hit Structure

CAS Registry Number  
870774-17-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1-[4-(1-naphthalenyl)phenyl]-6-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L5 ANSWER 2 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2009:920965 CAPLUS [Full-text](#)

Document Number

151:159940

Title

Organic **electroluminescent** device allowing adjustment of chromaticity

Author/Inventor

Kinoshita, Masaru

Patent Assignee/Corporate Source

Fuji Photo Film Co., Ltd., Japan

Source

U.S. Pat. Appl. Publ., 13 pp. CODEN: USXXCO

Document Type

Patent

Language

English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080185971	A1	20080807	US 2006-579061	20061027
<b>TW 267822</b>	<b>B</b>	<b>20061201</b>	<b>TW 2004-112026</b>	<b>20040429</b>
<b>WO 2005106835</b>	<b>A1</b>	<b>20051110</b>	<b>WO 2004-JP6354</b>	<b>20040430</b>
<b>CN 1977301</b>	<b>A</b>	<b>20070606</b>	<b>CN 2004-80042922</b>	<b>20040430</b>
CN 100487776	C	20090513		
KR 2007020051	A	20070216	KR 2006-7024970	20061128
KR 836542	B1	20080610		

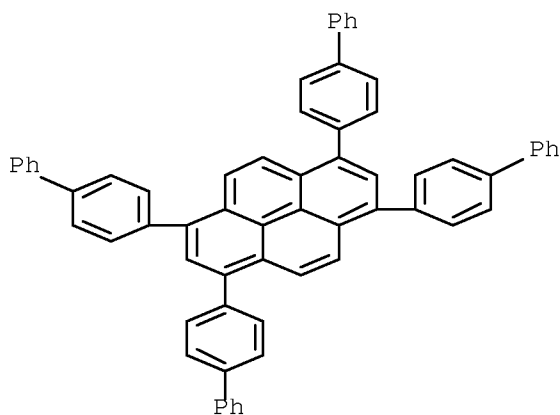
#### Abstract

Organic **electroluminescent** devices comprising an organic **electroluminescent** element comprising electrodes with an organic **electroluminescent** layer emitting white light at a chromaticity corresponding to a drive c.d. provided between the electrodes; and a drive unit driving the organic **electroluminescence** element by application of current or voltage and controlling the drive current and the period the current or voltage is applied per unit of time according to a chromaticity adjustment input, wherein in response to a first chromaticity adjustment input the drive unit controls, resp., the drive current or voltage to be a first current or voltage and the application period to be a first period, and in response to a second chromaticity adjustment input the drive unit controls, resp., the drive current or voltage to be a second current or voltage larger than the first current or voltage and the application period to be a second period shorter than the first period. Emission chromaticity can be adjusted while the brightness is kept constant. A liquid crystal display device employing an organic **electroluminescent** device as a backlight unit are also described.

#### Hit Structure

CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD  
(9 CITINGS)

L5 ANSWER 3 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2009:573003 CAPLUS [Full-text](#)

Document Number

150:539448

Title

Preparation of aromatic amine derivatives as doping materials for organic **electroluminescent** devices

Author/Inventor

Funabashi, Masakazu; Kubota, Mineyuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

Jpn. Tokkyo Koho, 33pp.; Chemical Indexing Equivalent to 145:356527 (WO) CODEN: JTXXXF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4263700	B2	20090513	JP 2005-73474	20050315
JP 2006256979	A	20060928		
WO 2006098080	A1	20060921	WO 2006-JP300516	20060117
EP 1860096	A1	20071128	EP 2006-711796	20060117
US 20060210830	A1	20060921	US 2006-336855	20060123
US 7816017	B2	20101019		
KR 2007110362	A	20071116	KR 2007-7020953	20070913
IN 2007CN04053	A	20071123	IN 2007-CN4053	20070917
CN 101142169	A	20080312	CN 2006-80008634	20070917
US 20110034733	A1	20110210	US 2010-854247	20100811

Abstract

The title compds. I [T1 = (A1)a; T2 = (A2)b; T3 = (A3)c; T4 = (A4)d; A1-A4 = H, Me, Et, etc.; a, b, c, d = 0-3; A5-A12 = Me, Et, Pr, etc.] are prepared Thus, the title compound II was prepared from the coupling reaction of 6,12-dibromochrysene with bis(3,4-dimethylphenyl)amine. An organic **electroluminescent** device containing II showed blue light and luminous efficiency 7.1 cd/A under voltage of 6.5 V.

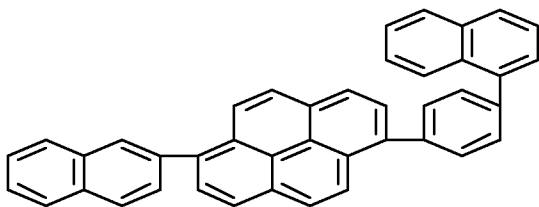
Hit Structure

CAS Registry Number

870774-21-3 CAPLUS

Chemical or Trade Name

Eyrene, 1-(2-naphthalenyl)-6-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(2 CITINGS)

L5 ANSWER 4 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2007:642430 CAPLUS [Full-text](#)

Document Number

147:62066

Title

Anthracene derivatives for use in organic electronic devices and their synthesis and the devices

Author/Inventor

Heil, Holger; Buesing, Arne; Stoessel, Philipp

Patent Assignee/Corporate Source

Merck Patent G.m.b.H., Germany

Source

PCT Int. Appl., 57pp. CODEN: PIXXD2

Document Type

Patent

Language

German

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007065678	A1	20070614	WO 2006-EP11758	20061207
DE 102005058557	A1	20070614	DE 2005-102005058557	20051208
EP 1957606	A1	20080820	EP 2006-829379	20061207
JP 2009518342	T	20090507	JP 2008-543731	20061207
US 20080303423	A1	20081211	US 2008-96536	20080606

Abstract

Compds. are described which comprise two substituted anthracene groups joined (at the 9 position) by  $\geq 1$  aromatic ring system and having at least a C5-30 (hetero)aromatic ring substituent at each 10 position, optionally with other substituents situated on the remaining positions. A method for synthesizing the compds. is described which entails forming the bonds between the anthracene groups and the aromatic groups using a Suzuki coupling reaction. The use of the compds. in electronic devices and devices employing the compds. (e.g., organic field-effect transistors, organic thin-film transistors, organic **light-emitting** transistors, organic integrated circuits, organic solar cells, organic field quenching devices, organic laser diodes, organic photoreceptors, and, especially, organic **electroluminescent** devices) are also described.

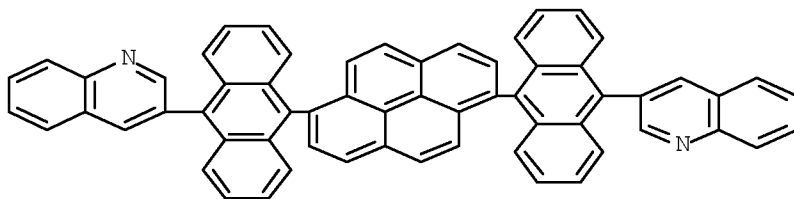
Hit Structure

CAS Registry Number

939973-71-4 CAPLUS

Chemical or Trade Name

Quinoline, 3,3'-(1,6-pyrenediyl-di-10,9-anthracenediyl)bis- (CA INDEX NAME)



\_L5 ANSWER 5 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2007:637739 CAPLUS [Full-text](#)  
Document Number  
147:62058

Title  
Organic blends for electronic devices, their use in electronic devices, especially **electroluminescent** devices, and the devices

Author/Inventor  
Vestweber, Horst; Stoessel, Philipp; Heil, Holger  
Patent Assignee/Corporate Source  
Merck Patent G.m.b.H., Germany

Source  
PCT Int. Appl., 61pp. CODEN: PIXXD2

Document Type  
Patent

Language  
German  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007065547	A1	20070614	WO 2006-EP11026	20061117
<del>DE 102005058557</del>	<del>A1</del>	<del>20070614</del>	<del>DE 2005-102005058557</del>	<del>20051208</del>
EP 1957603	A1	20080820	EP 2006-818609	20061117
JP 2009518831	T	20090507	JP 2008-543682	20061117
US 20080297037	A1	20081204	US 2008-96492	20080606
CN 101326260	A	20081217	CN 2006-80046146	20080606
KR 2008082681	A	20080911	KR 2008-7016431	20080707
IN 2008KN02737	A	20090123	IN 2008-KN2737	20080707

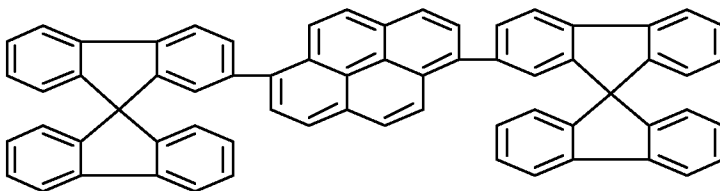
#### Abstract

Blends are described which comprise  $\geq 1$  tri[(hetero)arylviny](hetero)arylamine compound and  $\geq 1$  anthracene derivative with C5-30 (hetero)aromatic substituents, including anthracene derivs. comprising two anthracene groups joined at the 9 position by a single bond or a bridging group selected from C1-40 bivalent groups, -O-, -S-, or -NH-. The use of the compds. in electronic devices and devices employing the compds. (e.g., organic field-effect transistors, organic thin-film transistors, organic **light-emitting** transistors, organic integrated circuits, organic solar cells, organic field quenching devices, organic laser diodes, organic photoreceptors, and, especially, organic **electroluminescent** devices) are also described. Methods for producing **electroluminescent** devices including forming films from the blends are also described.

#### Hit Structure

CAS Registry Number  
723285-22-1 CAPLUS

Chemical or Trade Name  
9,9'-Spiro[9H-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



\_L5 ANSWER 6 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2007:585352 CAPLUS [Full-text](#)  
Document Number  
147:41936

Title  
Luminescent material containing pyrene compound and **light-emitting** device employing it

Author/Inventor  
Ogawa, Takashi; Tominaga, Takeshi; Murase, Seichiro  
Patent Assignee/Corporate Source  
Toray Industries, Inc., Japan

Source  
Jpn. Kokai Tokkyo Koho, 23pp. CODEN: JKXXAF

Document Type  
Patent

Language  
Japanese  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007131723	A	20070531	JP 2005-325760	20051110

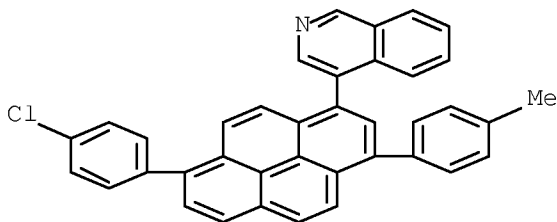
#### Abstract

The invention relates to a luminescent material and a **light-emitting** device employing it. The above material consists of the pyrene compound represented by the general formula I-II, where R1-R15 is selected from the fused rings formed between adjacency substituents, such as hydrogen, the alkyl group, the cycloalkyl group, and the heterocycle group, A is directly bonded to at least one of R1-R10; Y1-Y5 is selected from nitrogen or carbon atom; when one of Y1-Y5 is nitrogen atom, the substitute of R11-R15 on the nitrogen atom does not exist.

#### Hit Structure

CAS Registry Number  
936719-68-5 CAPLUS

Chemical or Trade Name  
Isoquinoline, 4-[8-(4-chlorophenyl)-3-(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



.L5 ANSWER 7 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2007:585349 CAPLUS [Full-text](#)

Document Number

146:530861

Title

Luminescent material and **light-emitting** device employing it

Author/Inventor

Ogawa, Takashi; Murase, Seichiro; Nagao, Kazuma

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

Jpn. Kokai Tokkyo Koho, 22pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007131722	A	20070531	JP 2005-325759	20051110

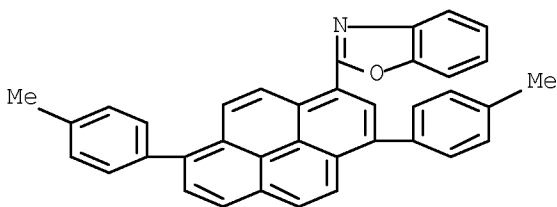
Abstract

The invention relates to a luminescent material and **light-emitting** device employing it. The above material consists of anthracene compound represented by I, where A is the direct bond, the arylene group, etc. and R1-R19 are H, the alkyl group, etc., at least one of R11-R18 is the alkyl group, the aryl group, etc., at least one of R11-R19 and R1-R10 is used for the connection with A.

Hit Structure

CAS Registry Number  
908011-69-8 CAPLUS

Chemical or Trade Name  
Benzoxazole, 2-[3,8-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD  
(2 CITINGS)

.L5 ANSWER 8 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2007:352951 CAPLUS [Full-text](#)

Document Number

146:390110

Title

Blue **light-emitting** materials and devices using pyrene compounds

Author/Inventor

Sugimoto, Kazunori; Murase, Seichiro; Nagao, Kazuma

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

Jpn. Kokai Tokkyo Koho, 27pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007077185	A	20070329	JP 2005-263424	20050912

Abstract

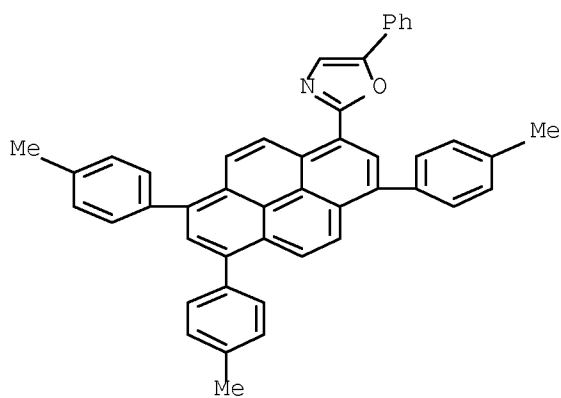
The materials contain pyrene compds. I (R1-R14 = H, alkyl, cycloalkyl, heterocyclic group, alkenyl, cycloalkenyl, alkynyl, alkoxy, alkylthio, arylether, arylthioether, aryl, heteroaryl, halo, CN, carbonyl, CO2H, oxycarbonyl, carbamoyl, amino, phosphine oxide; R1-R14 may form condensed ring with their adjacent groups; ≥1 of R1-R10 and ≥1 of R11-R14 = single bond; X1 = O, S, NR15; Y1-Y4 = N, C; ≥1 of Y1-Y4 = N and ≥1 of Y1-Y4 = C; R15 = H, alkyl, cycloalkyl, heterocyclic group, alkenyl, cycloalkenyl, alkynyl, aryl, heteroaryl, CN, carbonyl, CO2H, oxycarbonyl, carbamoyl). The devices having **light-emitting** layers between anodes and cathodes and emitting light by elec. energy contain the materials. The devices show high luminescent efficiency.

Hit Structure

CAS Registry Number  
908011-57-4 CAPLUS

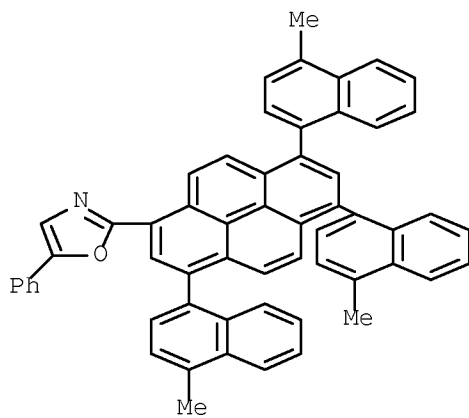
Chemical or Trade Name  
Oxazole, 5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA INDEX

NAME)



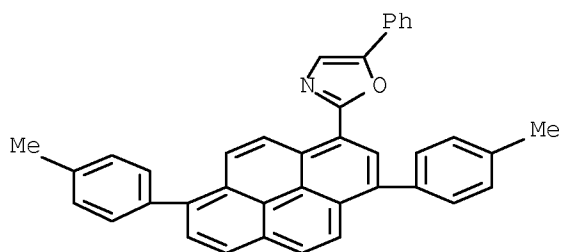
CAS Registry Number  
908011-58-5 CAPLUS

Chemical or Trade Name  
Oxazole, 5-phenyl-2-[3,6,8-tris(4-methyl-1-naphthalenyl)-1-pyrenyl]- (CA INDEX NAME)



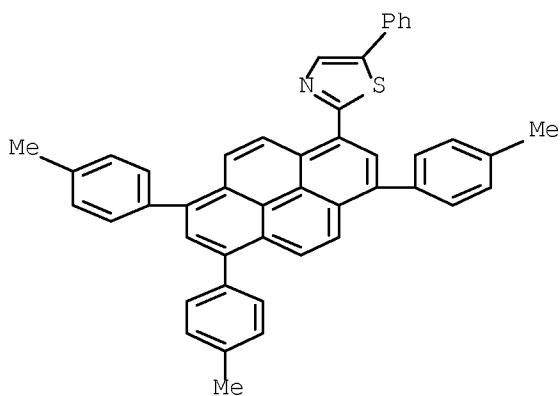
CAS Registry Number  
908011-61-0 CAPLUS

Chemical or Trade Name  
Oxazole, 2-[3,8-bis(4-methylphenyl)-1-pyrenyl]-5-phenyl- (CA INDEX NAME)



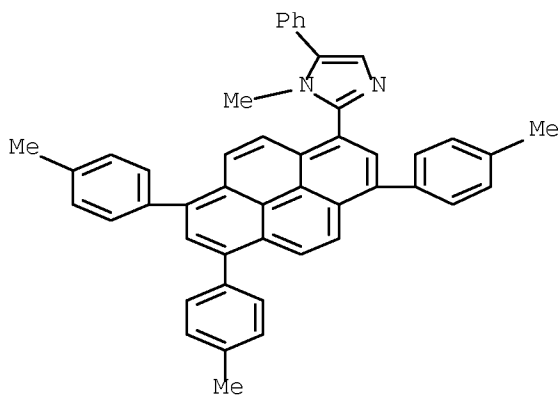
CAS Registry Number  
908011-62-1 CAPLUS

Chemical or Trade Name  
Thiazole, 5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



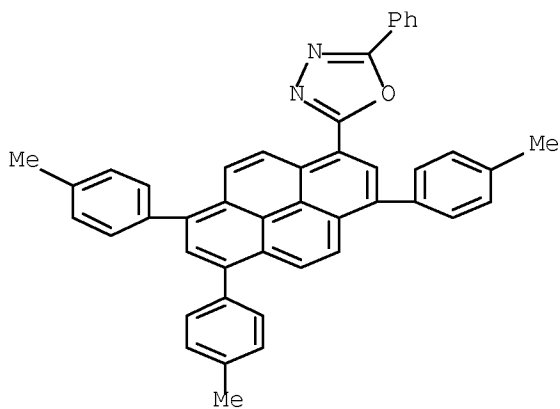
CAS Registry Number  
908011-63-2 CAPLUS

Chemical or Trade Name  
1H-Imidazole, 1-methyl-5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]-  
(CA INDEX NAME)



CAS Registry Number  
908011-64-3 CAPLUS

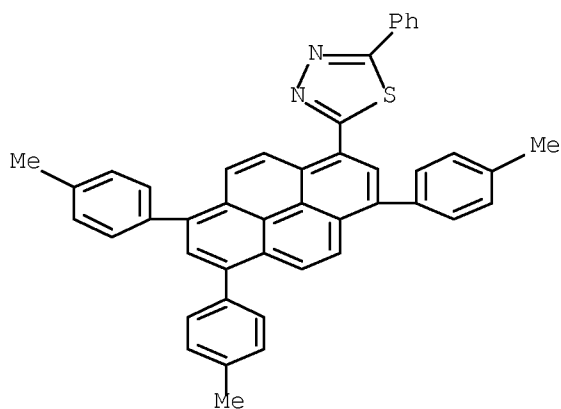
Chemical or Trade Name  
1,3,4-Oxadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA  
INDEX NAME)





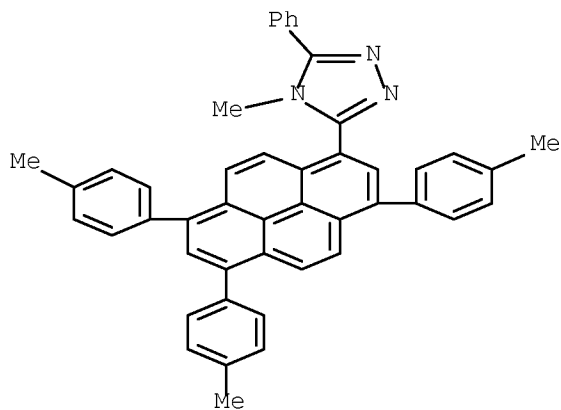
CAS Registry Number  
908011-65-4 CAPLUS

Chemical or Trade Name  
1,3,4-Thiadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA  
INDEX NAME)



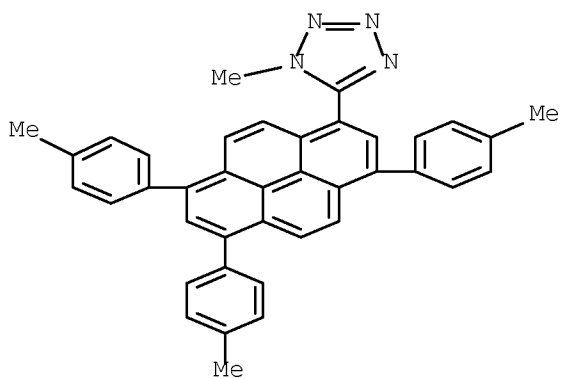
CAS Registry Number  
908011-66-5 CAPLUS

Chemical or Trade Name  
4H-1,2,4-Triazole, 4-methyl-3-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-  
pyrenyl]- (CA INDEX NAME)



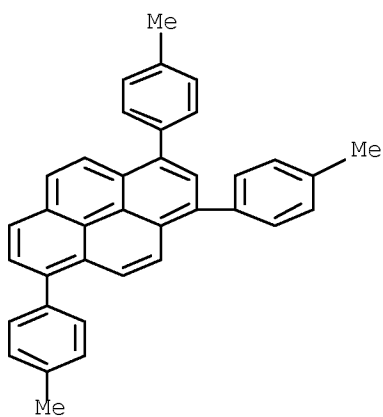
CAS Registry Number  
930088-30-5 CAPLUS

Chemical or Trade Name  
1H-Tetrazole, 1-methyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA  
INDEX NAME)



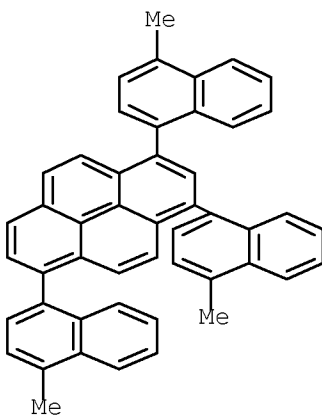
CAS Registry Number  
908011-84-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris(4-methylphenyl)- (CA INDEX NAME)



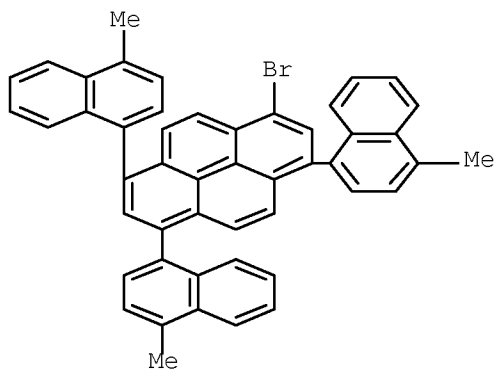
CAS Registry Number  
908011-85-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



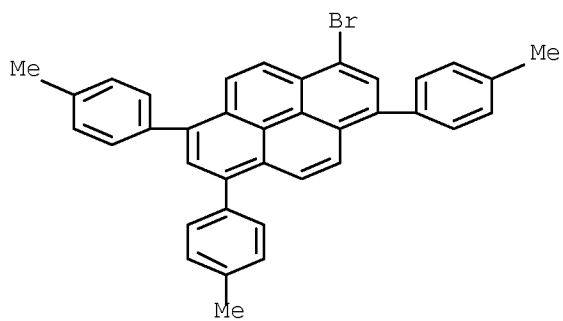
CAS Registry Number  
908011-86-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,6,8-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



CAS Registry Number  
930088-31-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,6,8-tris(4-methylphenyl)- (CA INDEX NAME)



Accession Number

2007:33414 CAPLUS [Full-text](#)

Document Number

146:121699

Title

Process for preparation of pyrene derivatives for use in organic **electroluminescence** devices

Author/Inventor

Ito, Mitsunori; Kubota, Mineyuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 62pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007004364	A1	20070111	WO 2006-JP310194	20060523
<b>JP 2007015961</b>	<b>A</b>	20070125	<b>JP 2005-197765</b>	<b>20050706</b>
EP 1905754	A1	20080402	EP 2006-746728	20060523
US 20080124571	A1	20080529	US 2007-926813	20071029
US 7585574	B2	20090908		
CN 101213161	A	20080702	CN 2006-80024361	20080103
KR 2008027332	A	20080326	KR 2008-7000282	20080104
IN 2008CN00622	A	20081128	IN 2008-CN622	20080206

Abstract

This invention pertains to a method for producing pyrene derivs. via coupling reaction, for the use in organic **electroluminescence** devices comprising a neg. electrode and a pos. electrode and, interposed there between, one or two or more organic thin film layers including at least a **light emitting** layer, wherein at least one of the organic thin film layers contains the pyrene derivative alone or as a component of mixture. For example, the compound I was prepared in a three-step synthesis starting from pyrene-1-boronic acid and 3-bromo-1-iodobenzene in good yield. Thus, there is provided an organic **electroluminescence** device of high luminous efficiency capable of prolonged blue **light emission**.

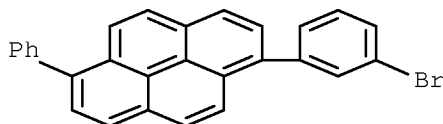
Hit Structure

CAS Registry Number

918655-02-4 CAPLUS

Chemical or Trade Name

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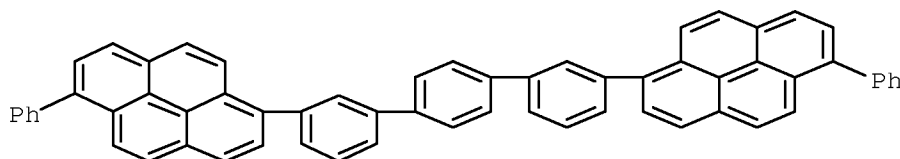


CAS Registry Number

918654-67-8 CAPLUS

Chemical or Trade Name

Pyrene, 1,1'-[1,1':4',1''-terphenyl]-3,3''-diylbis[6-phenyl- (CA INDEX NAME)

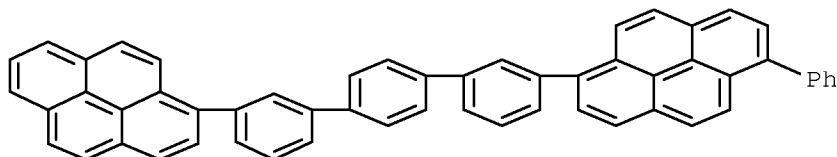


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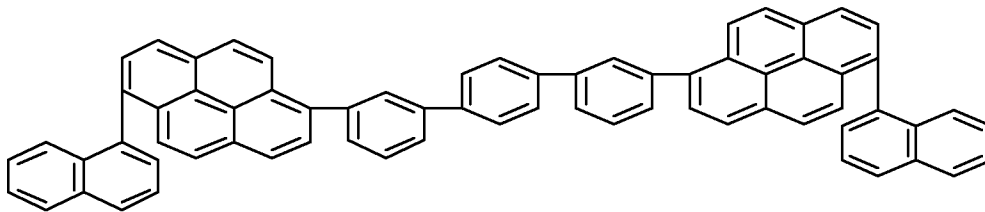
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CAS Registry Number

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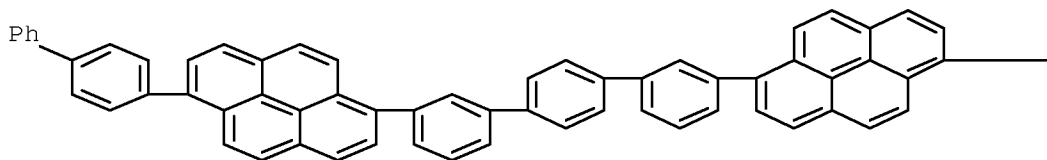
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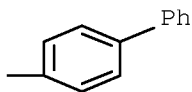
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 (CA INDEX NAME)

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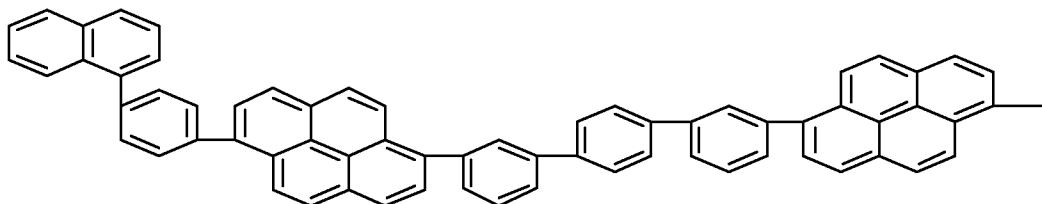
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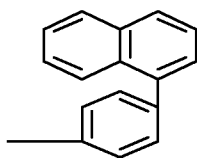
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 (CA INDEX NAME)

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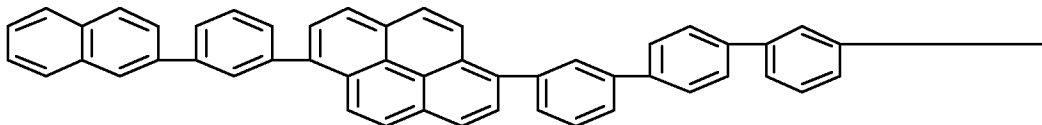
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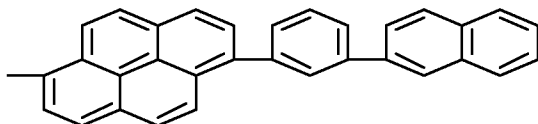
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Chemical or Trade Name  
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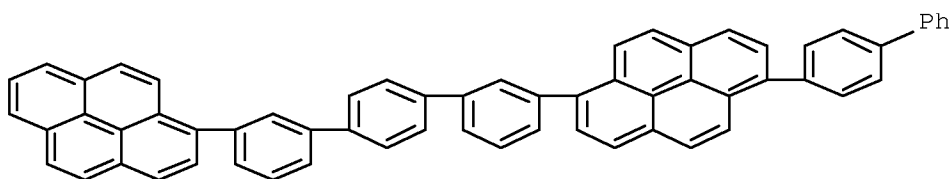


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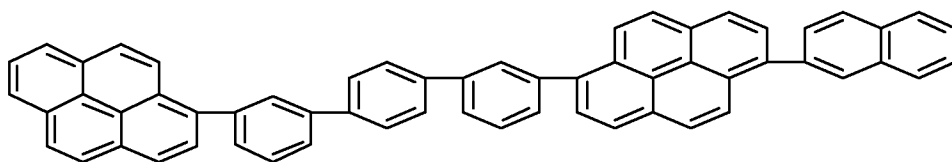
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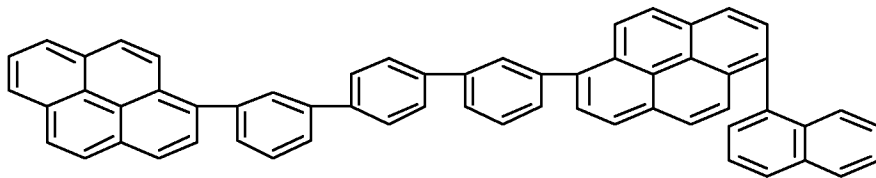
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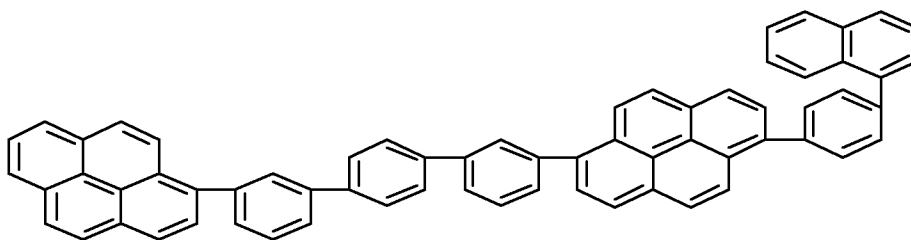
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Chemical or Trade Name  
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CAS Registry Number  
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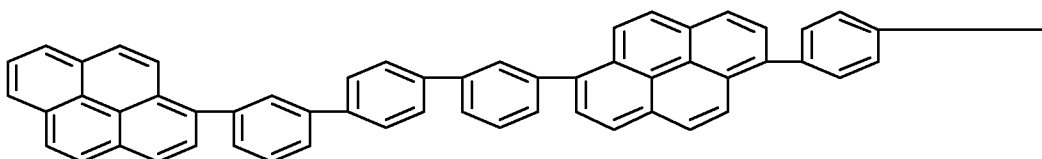
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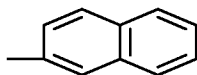
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Chemical or Trade Name  
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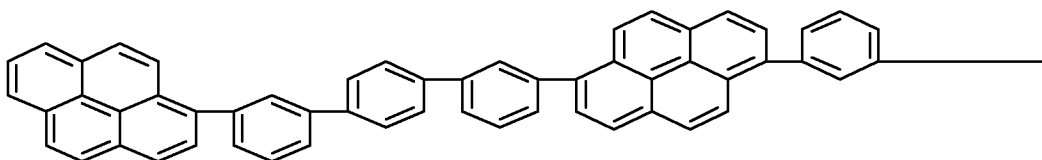
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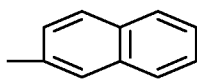


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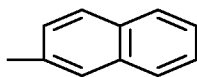
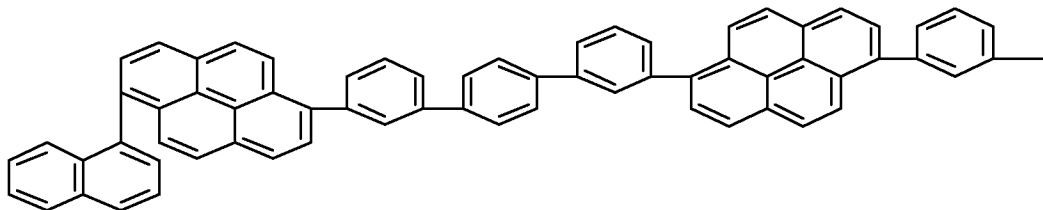
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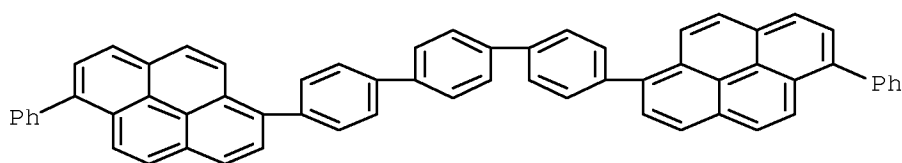
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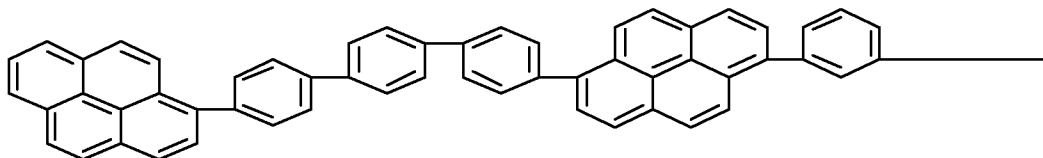
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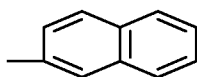


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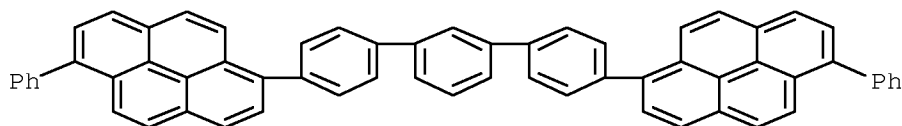






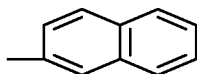
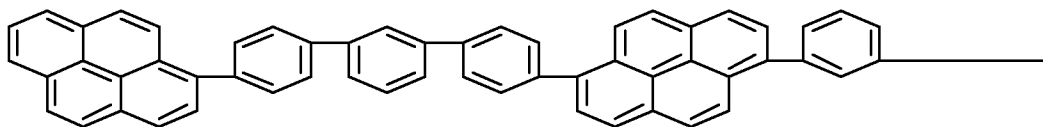
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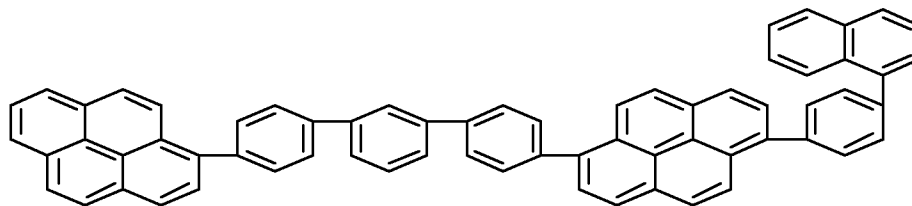
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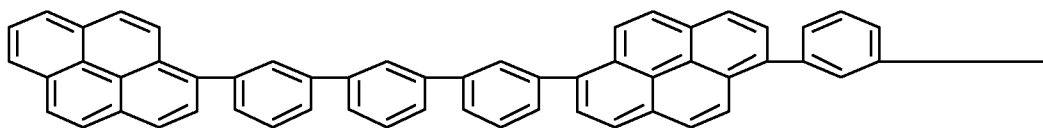
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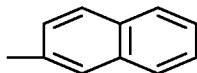
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Chemical or Trade Name  
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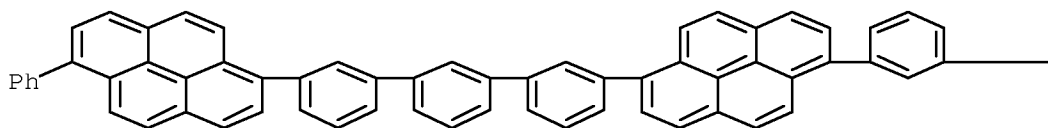
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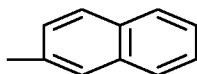
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Chemical or Trade Name  
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PAGE 1-A

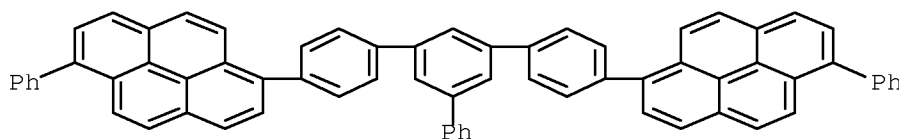


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CAS Registry Number  
918654-92-9 CAPLUS

Chemical or Trade Name  
Fyzene, 1,1'-(5'-phenyl[1,1':3,3''-terphenyl]-4,4''-diyl)bis[6-phenyl- (CA INDEX NAME)]



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L5 ANSWER 10 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2006:1309504 CAPLUS [Full-Text](#)

Document Number

146:73195

Title

Multicyclic materials for organic electronic devices and devices using them

Author/Inventor

Heil, Holger; Buesing, Arne; Stoessel, Philipp; Vestweber, Horst

Patent Assignee/Corporate Source

Merck Patent G.m.b.H., Germany

Source

PCT Int. Appl., 61pp. CODEN: PIXXD2

Document Type

Patent

Language

German

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006131192	A1	20061214	WO 2006-EP4609	20060516
DE 102005026651	A1	20061214	DE 2005-102005026651	20050609
EP 1888707	A1	20080220	EP 2006-753643	20060516
JP 2008545762	T	20081218	JP 2008-515076	20060516
US 20090128009	A1	20090521	US 2008-916070	20080508

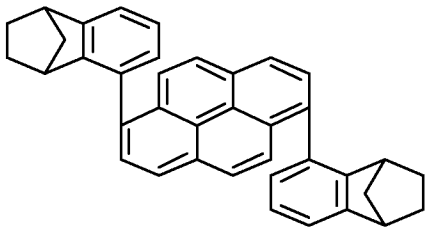
#### Abstract

Materials are described which comprise condensed aromatic systems including  $\geq 1$  C $\geq 14$  (hetero)aryl groups. Polymers, oligomers, and dendrimers are described which have repeating units based on the compds. Electronic devices (e.g., organic and polymeric **electroluminescent** devices, organic FETs, organic integrated circuits, organic thin-film transistors, organic solar cells, organic field quenching devices, organic **light-emitting** transistors, **light-emitting** electrochem. cells, organic photoreceptors, and organic laser diodes) using the materials, polymers, oligomers, dendrimers, or mixts. containing them are also described.

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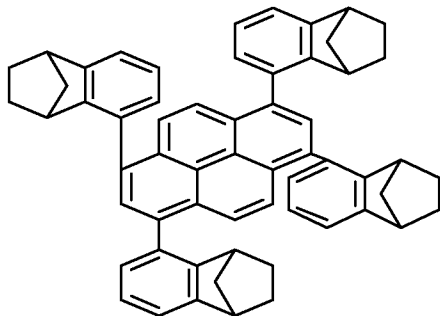
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CAS Registry Number  
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Chemical or Trade Name  
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OS.CITING REF COUNTI: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
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L5 ANSWER 11 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

#### Accession Number

2006.1157695 CAPLUS [Full-text](#)

#### Document Number

145:471240

#### Title

Preparation of aromatic amine derivatives and organic **electroluminescent** device containing them

#### Author/Inventor

Hosokawa, Chishio; Kawamura, Masahiro; Funahashi, Masakazu

#### Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

#### Source

PCT Int. Appl., 43pp. CODEN: PIXXD2

#### Document Type

Patent

#### Language

Japanese

#### Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006114949	A1	20061102	WO 2006-JP305007	20060314
JP 2006298793	A	20061102	JP 2005-119880	20050418
US 20060251925	A1	20061109	US 2006-378332	20060320
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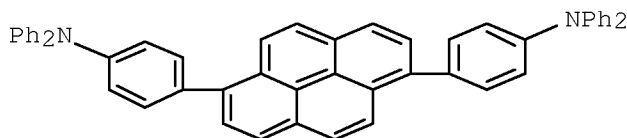
# Abstract

The title compds. I [A1, A2, R1 = H, (un)substituted alkyl, (un)substituted aryl, etc.; m, n = 0 - 50; when m or n ≥ 2, substituents A1, A2 may be the same or different and may combine to form (un)saturated rings; x = 1 - 4; when x ≥ 2, the structures within the brackets may be the same or different; q = 0 - 9; when q ≥ 2, substituents R1 may be the same or different; X1 = (un)substituted arylene] are prepared. Thus, the title compound II was prepared from 1,6-dibromopyrene and 4-(diphenylamino)phenylboronic acid in presence of tetrakis(triphenylphosphine)palladium. An organic electroluminescent element containing II showed high light emission luminance and excellent high-temperature storage stability.

## Hit Structure

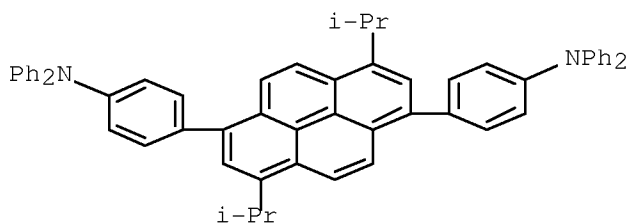
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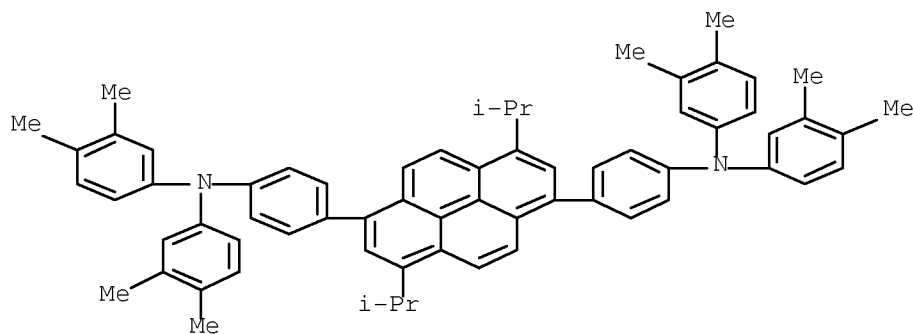
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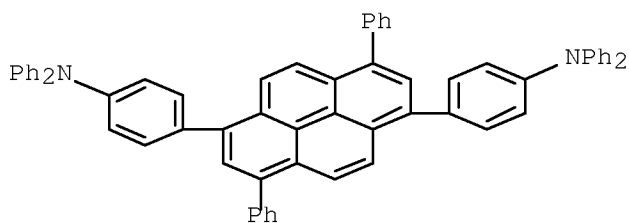
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Chemical or Trade Name  
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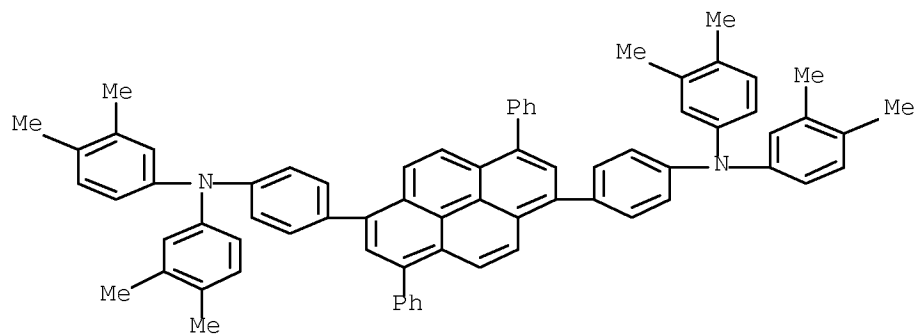
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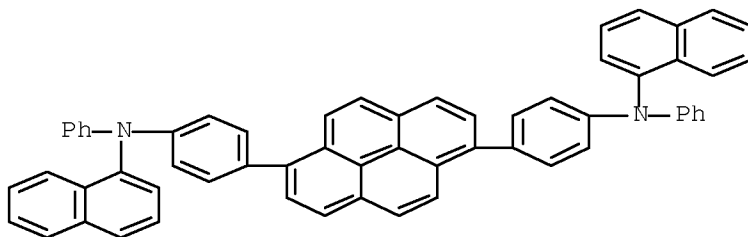
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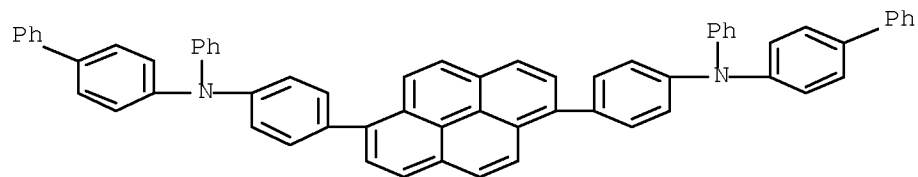
CAS Registry Number  
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Chemical or Trade Name  
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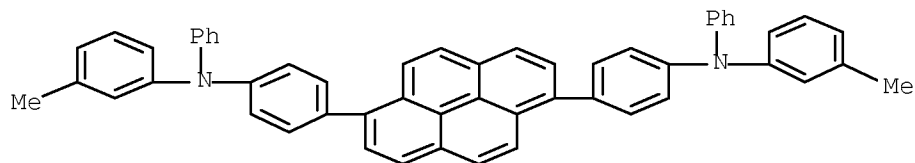
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Chemical or Trade Name  
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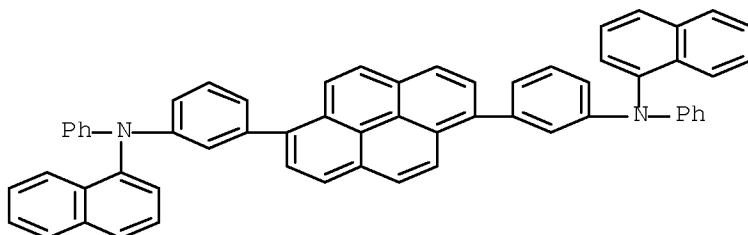
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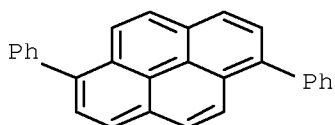
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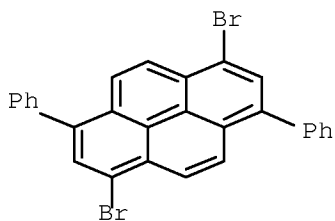
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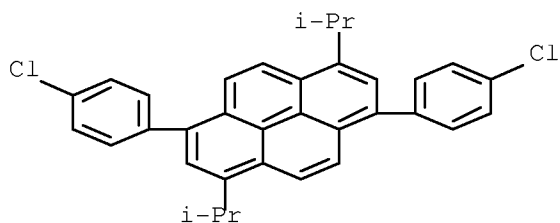
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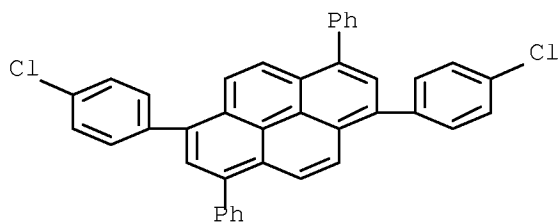
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Chemical or Trade Name  
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CAS Registry Number  
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Chemical or Trade Name  
Pyrene, 1,6-bis(4-chlorophenyl)-3,8-diphenyl- (CA INDEX NAME)



L5 ANSWER 12 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
20061097663 CAPLUS [Full-text](#)

Document Number  
145:429142

Title  
Hybrid OLED having phosphorescent and fluorescent emitters

Author/Inventor  
Tung, Yeh-Jiun; Weaver, Michael S.; Hack, Michael; Esler, James

Patent Assignee/Corporate Source  
Universal Display Corp., USA

Source  
U.S. Pat. Appl. Publ., 24 pp. CODEN: USXXCO

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060232194	A1	20061019	US 2005-105666	20050413
WO 2006113106	A1	20061026	WO 2006-US12158	20060330

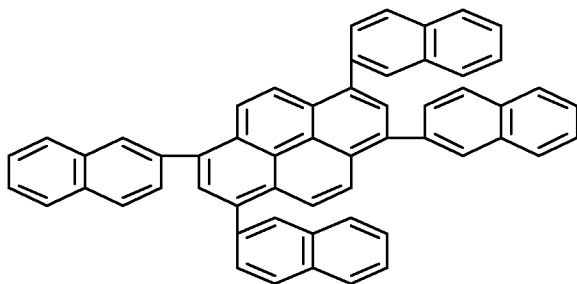
Abstract

An organic **light emitting** devices having a combined emission from at least two emissive materials, a fluorescent blue emissive material and a phosphorescent emissive material is described. The OLEDs may include three different emissive materials a red emissive material, a green emissive material and a blue emissive material for white emission.

Hit Structure

CAS Registry Number  
887909-59-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

.L5 ANSWER 13 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:1038072 CAPLUS [Full-text](#)  
Document Number  
145:407183

Title  
Arylpyrene compounds and organic **light-emitting** devices using them

Author/Inventor  
Kwong, Raymond; Nugent, Matthew  
Patent Assignee/Corporate Source  
Universal Display Corporation, USA

Source  
U.S. Pat. Appl. Publ., 48 pp. CODEN: USXXCO

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060222886	A1	20061005	US 2005-97352	20050404
WO 2006107646	A1	20061012	WO 2006-US11211	20060327

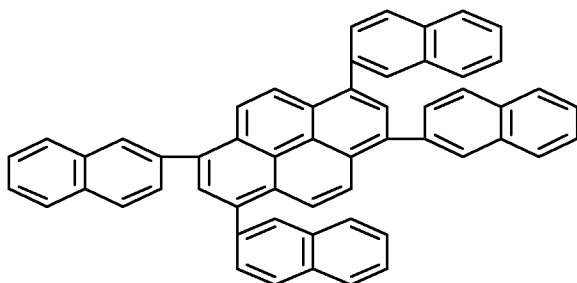
Abstract

Arylpyrene compds. are described which comprise pyrene cores with 2-naphthyl derivative substituents at the 1, 3, 6, and 8 positions, the 2-naphthyl derivs. having H atoms at the positions adjacent to the attachment point (positions 1 and 3) and independently selected substituents or H atoms at other points. Organic **light-emitting** devices with organic layers including the naphthylpyrene compds. are also described.

Hit Structure

CAS Registry Number  
887909-59-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



.L5 ANSWER 14 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:1037379 CAPLUS [Full-text](#)  
Document Number  
145:407804

Title  
The organic **electroluminescent** elements and displays

Author/Inventor  
Nakayama, Masaya  
Patent Assignee/Corporate Source  
Fuji Photo Film Co., Ltd., Japan

Source  
Jpn. Kokai Tokkyo Koho, 31pp. CODEN: JKXXAF

Document Type  
Patent

Language  
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006269670	A	20061005	JP 2005-84525	20050323
US 20070154735	A1	20070705	US 2006-386675	20060323

Abstract

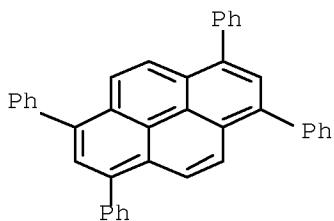
The disclosed organic **electroluminescent** element comprises a support, organic **electroluminescent** layers, at least one of which contains a 1,3,6,8-tetraphenylpyrene derivative and a triphenylbenzene derivative. The preferred triphenylbenzene derivative is 1,3,5-tris[4-(N-carbazolyl)phenyl]benzene. The **electroluminescent** element has high emission efficiency, good luminosity, and color purity..

Hit Structure

CAS Registry Number  
13638-82-9 CAPLUS

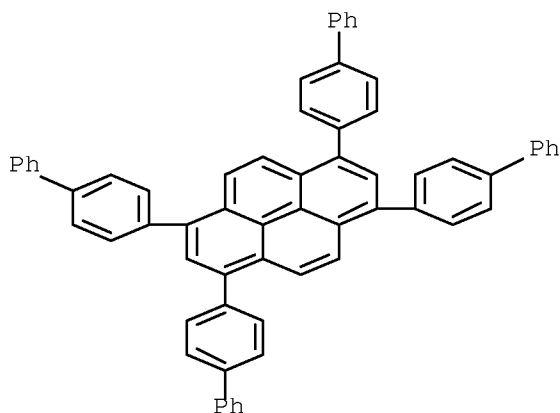
Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)





CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



.L5 ANSWER 15 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2006:1030333 CAPLUS [Full Text](#)

Document Number

145:386064

Title

Organic electroluminescent devices showing high luminescent efficiency and terphenyl derivatives therefor

Author/Inventor

Takagi, Katsuhiko; Kimura, Makoto; Hosokawa, Chishio; Funabashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

Jpn. Kokai Tokkyo Koho, 22pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006265108	A	20061005	JP 2005-81233	20050322

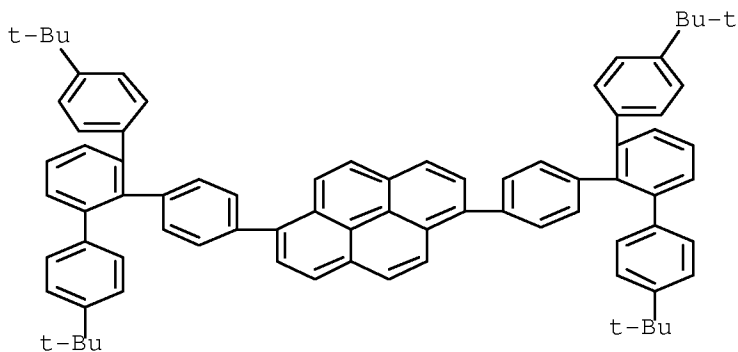
Abstract

Terphenyl deriv. I (X1 = C6-50 aromatic hydrocarbon or C5-50 aromatic heterocycle; R1-R3, A1, A2 = H, C6-50 aromatic hydrocarb., C5-50 aromatic heterocycle, etc.; a, b = 1-5; m = 1-4; A1 and/or A2 = C1-6 alkyl, C3-10 cycloalkyl) and organic LED containing the same in one of their constituent organic layers are sep. claimed. Thus, 10 mmol 1,3-dichlorobenzene was reacted with n-BuLi at -78° in THF, 30 mmol 4-tert-butylphenylmagnesium bromide, and then with 30 mmol 2-isopropoxy-4,4,5,5-tetramethyl-1,3,2-dioxaborolane to give a boronic acid derivative, 4 mmol of which was reacted with 9,10-bis(p-bromophenyl)anthracene in the presence of Pd catalyst to give a white product of II in 28% yield. An organic LED containing II showed blue emission with luminance half life ≥20,000 h.

Hit Structure

CAS Registry Number  
910556-12-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis[4'-(1,1-dimethylethyl)-6'-[4-(1,1-dimethylethyl)phenyl][1,1':2',1''-terphenyl]-4-yl]- (9CI) (CA INDEX NAME)



.L5 ANSWER 16 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2006:974950 CAPLUS ~~Full-text~~

Document Number

145:356527

Title

Preparation of aromatic amine derivatives as doping materials for organic electroluminescent devices

Author/Inventor

Funahashi, Masakazu; Kubota, Mineyuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 52pp.; Chemical Indexing Equivalent to 150:539448 (JP) CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006098080	A1	20060921	WO 2006-JP300516	20060117
JP 4263700	B2	20090513	JP 2005-73474	20050315
JP 2006256979	A	20060928		
EP 1860096	A1	20071128	EP 2006-711796	20060117
KR 2007110362	A	20071116	KR 2007-7020953	20070913
IN 2007CN04053	A	20071123	IN 2007-CN4053	20070917
CN 101142169	A	20080312	CN 2006-80008634	20070917

Abstract

The title compds. I [T1 = (A3)c; T2 = (A4)d; T3 = (A1)a; T4 = (A2)b; A1 - A4 = H, (un)substituted alkyl, (un)substituted aryl, (un)substituted aralkyl, etc.; a, b, c, d = 0 - 3; A5 - A12 = (un)substituted alkyl, (un)substituted aryl, (un)substituted aralkyl, etc.; or A5 and A6, A7 and A8, A9 and A10, A11 and A12 may be connected to form a ring; R1 - R10 = H, (un)substituted alkyl, (un)substituted aryl, (un)substituted aralkyl, etc.] are prepared. Thus, the title compound II was prepared from the coupling reaction of 6,12-dibromochrysene with bis(3,4-dimethylphenyl)amine. An organic electroluminescent device containing II showed blue light and luminous efficiency 7.1 cd/A under voltage of 6.5 V.

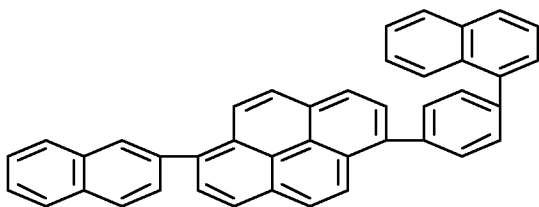
Hit Structure

CAS Registry Number

870774-21-3 CAPLUS

Chemical or Trade Name

Pyrene, 1-(2-naphthalenyl)-6-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT:

6

THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD  
(6 CITINGS)

Accession Number

2006:884879 CAPLUS [Full-text](#)

Document Number

145:302452

Title

Material for **light-emitting** element and **light-emitting** element

Author/Inventor

Sugimoto, Kazunori; Murase, Seiichi; Kitazawa, Daisuke; Nagao, Kazumasa; Ogawa, Takafumi; Tominaga, Tsuyoshi

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

PCT Int. Appl., 77pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006090772	A1	20060831	WO 2006-JP303254	20060223
JP 2006265515	A	20061005	JP 2005-180464	20050621
EP 1852486	A1	20071107	EP 2006-714394	20060223
KR 2007114723	A	20071204	KR 2007-7019375	20070824
US 20090066245	A1	20090312	US 2007-817143	20070824
US 7901794	B2	20110308		
CN 101128561	A	20080220	CN 2006-80006231	20070827

Abstract

The invention relates to a material for a **light-emitting** device comprising a pyrene compound represented by a general formula I; where R1 to R10 independently represent a specific functional group, provided that at least one of R1 to R10 represents a substituent represented by a general formula II; where R11 to R14 independently represent a specific functional group, provided that any one of R11 to R14 is used for the single bonding to the pyrene backbone; X1 represents any one of the groups of -O-, -S-, -N(R15); Y1 to Y4 are independently selected from a nitrogen atom and a carbon atom, provided that at least one of Y1 to Y4 is a nitrogen atom and at least one of Y1 to Y4 is a carbon atom and, when it is a nitrogen atom, the nitrogen atom has no substituent attached, R15 represents a specific functional group. By using this material, a **light-emitting** device having higher **light-emitting** efficiency and excellent durability can be provided.

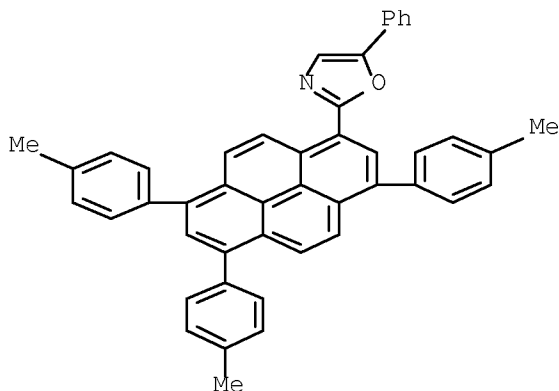
Hit Structure

CAS Registry Number

908011-57-4 CAPLUS

Chemical or Trade Name

Oxazole, 5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)

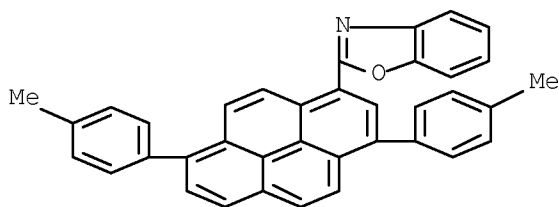


CAS Registry Number

908011-69-8 CAPLUS

Chemical or Trade Name

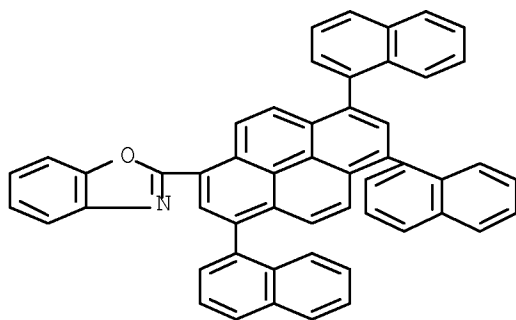
Benzoxazole, 2-[3,6-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



CAS Registry Number

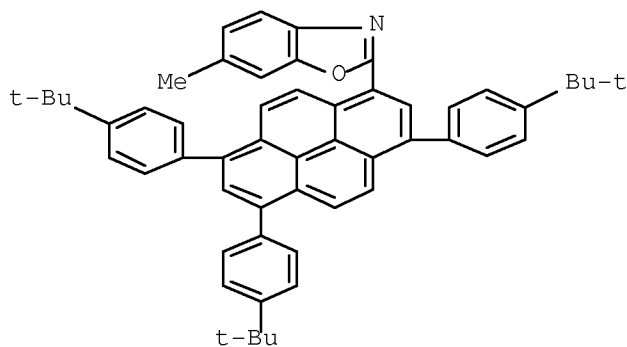
908011-70-1 CAPLUS

Chemical or Trade Name  
 Benzoxazole, 2-(3,6,8-tri-1-naphthalenyl-1-pyrenyl)- (CA INDEX NAME)



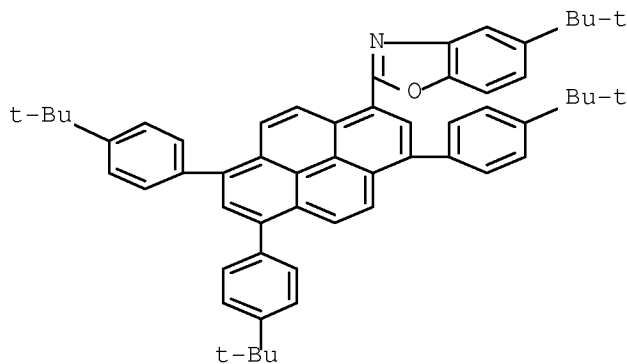
CAS Registry Number  
 908011-74-5 CAPLUS

Chemical or Trade Name  
 Benzoxazole, 6-methyl-2-[3,6,8-tris[4-(1,1-dimethylethyl)phenyl]-1-pyrenyl]- (CA INDEX NAME)



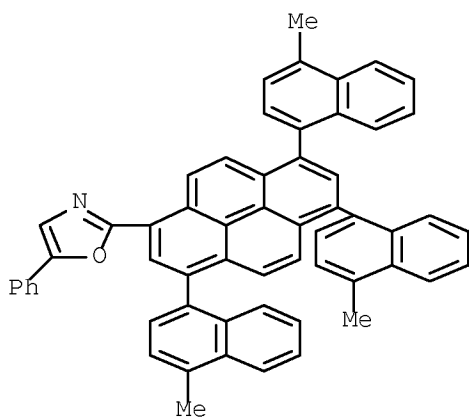
CAS Registry Number  
 908011-75-6 CAPLUS

Chemical or Trade Name  
 Benzoxazole, 5-(1,1-dimethylethyl)-2-[3,6,8-tris[4-(1,1-dimethylethyl)phenyl]-1-pyrenyl]- (CA INDEX NAME)



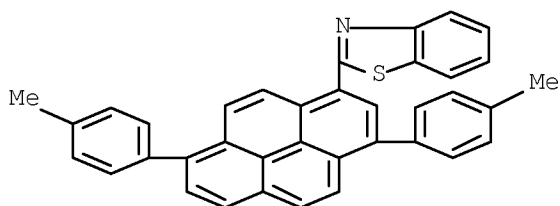
CAS Registry Number  
 908011-58-5 CAPLUS

Chemical or Trade Name  
 Oxazole, 5-phenyl-2-[3,6,8-tris(4-methyl-1-naphthalenyl)-1-pyrenyl]- (CA INDEX NAME)



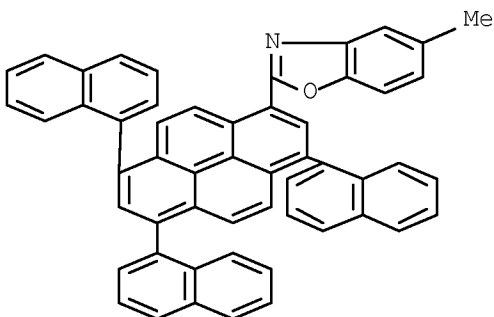
CAS Registry Number  
908011-68-7 CAPLUS

Chemical or Trade Name  
Benzothiazole, 2-[3,8-bis(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



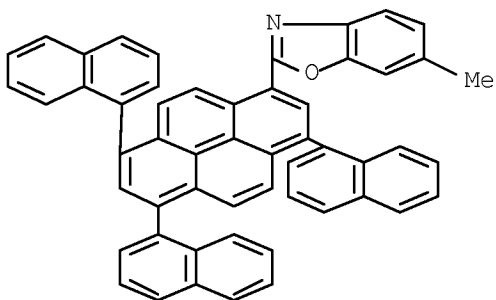
CAS Registry Number  
908011-71-2 CAPLUS

Chemical or Trade Name  
Benzoxazole, 5-methyl-2-[(3,6,8-tri-1-naphthalenyl)-1-pyrenyl]- (CA INDEX NAME)



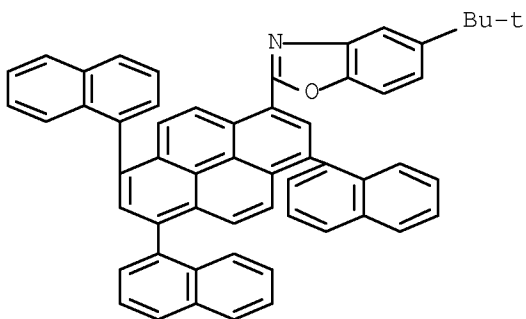
CAS Registry Number  
908011-72-3 CAPLUS

Chemical or Trade Name  
Benzoxazole, 6-methyl-2-[(3,6,8-tri-1-naphthalenyl)-1-pyrenyl]- (CA INDEX NAME)



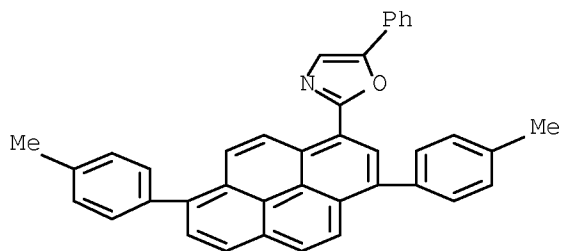
CAS Registry Number  
908011-73-4 CAPLUS

Chemical or Trade Name  
Benzoxazole, 5-(1,1-dimethylethyl)-2-(3,6,8-tri-1-naphthalenyl-1-pyrenyl)-  
(CA INDEX NAME)



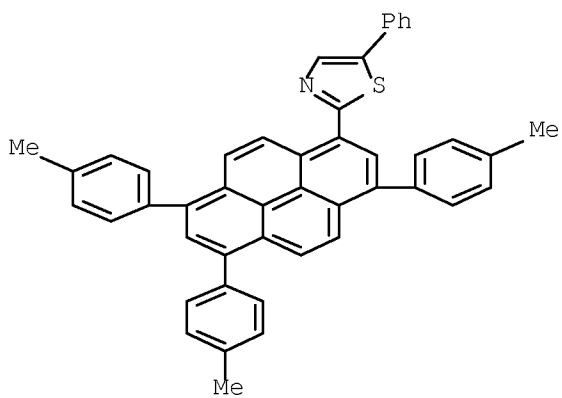
CAS Registry Number  
908011-61-0 CAPLUS

Chemical or Trade Name  
Oxazole, 2-[3,8-bis(4-methylphenyl)-1-pyrenyl]-5-phenyl- (CA INDEX NAME)



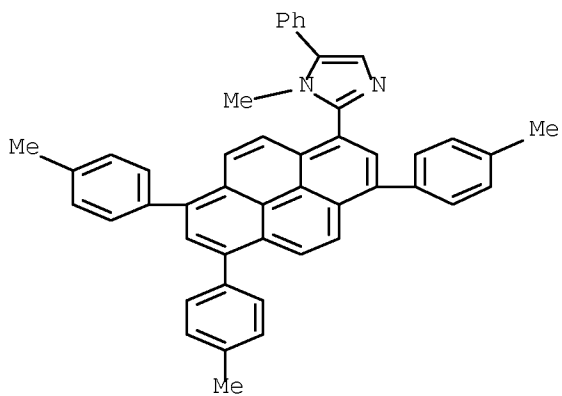
CAS Registry Number  
908011-62-1 CAPLUS

Chemical or Trade Name  
Thiazole, 5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



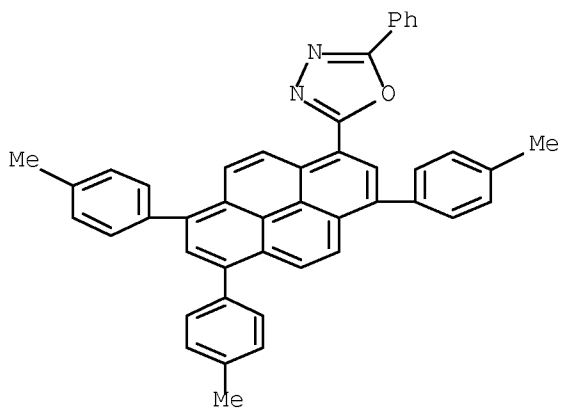
CAS Registry Number  
908011-63-2 CAPLUS

Chemical or Trade Name  
1H-Imidazole, 1-methyl-5-phenyl-2-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]-  
(CA INDEX NAME)



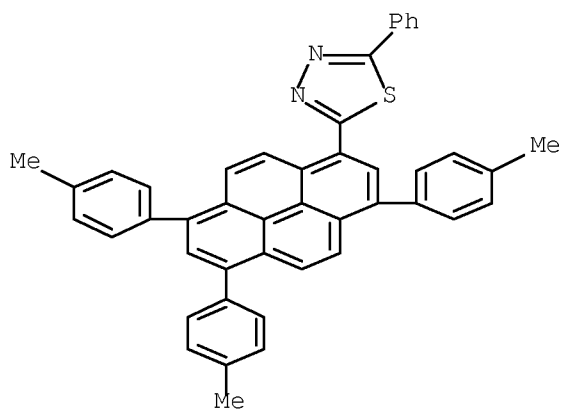
CAS Registry Number  
908011-64-3 CAPLUS

Chemical or Trade Name  
1,3,4-Oxadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA  
INDEX NAME)



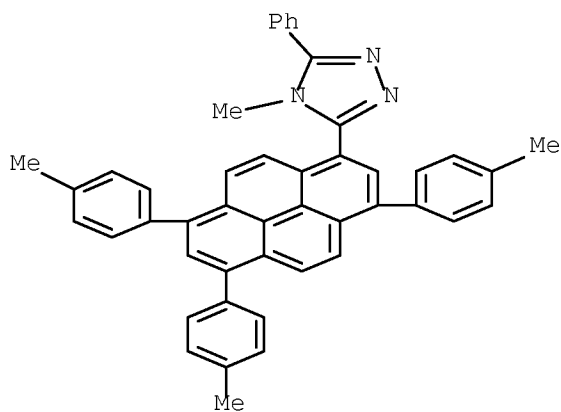
CAS Registry Number  
908011-65-4 CAPLUS

Chemical or Trade Name  
1,3,4-Thiadiazole, 2-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-pyrenyl]- (CA  
INDEX NAME)



CAS Registry Number  
908011-66-5 CAPLUS

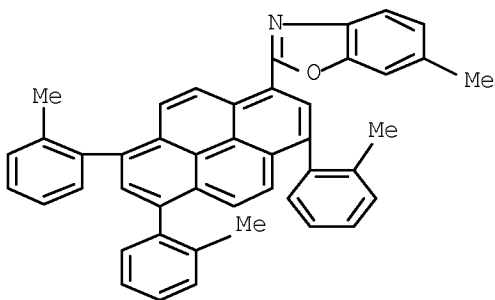
Chemical or Trade Name  
4H-1,2,4-Triazole, 4-methyl-3-phenyl-5-[3,6,8-tris(4-methylphenyl)-1-  
pyrenyl]- (CA INDEX NAME)



CAS Registry Number  
908011-76-7 CAPLUS

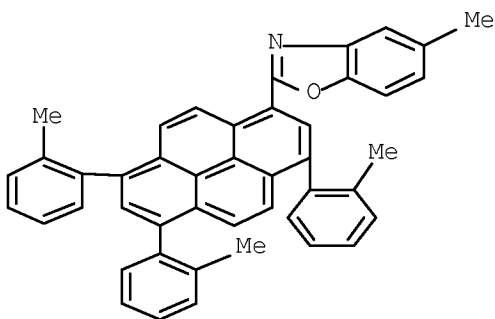
Chemical or Trade Name  
Benzoxazole, 6-methyl-2-[3,6,8-tris(2-methylphenyl)-1-pyrenyl]- (CA INDEX  
NAME)





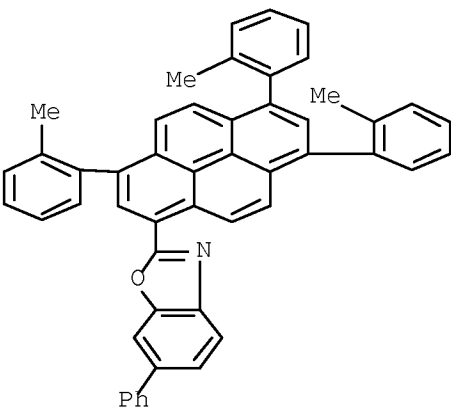
CAS Registry Number  
908011-77-8 CAPLUS

Chemical or Trade Name  
Benzoxazole, 5-methyl-2-[3,6,8-tris(2-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



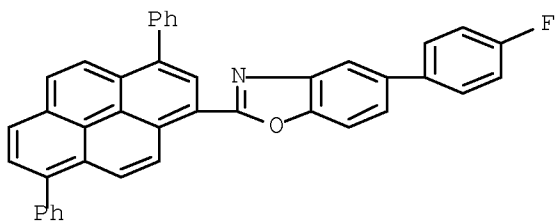
CAS Registry Number  
908011-78-9 CAPLUS

Chemical or Trade Name  
Benzoxazole, 6-phenyl-2-[3,6,8-tris(2-methylphenyl)-1-pyrenyl]- (CA INDEX NAME)



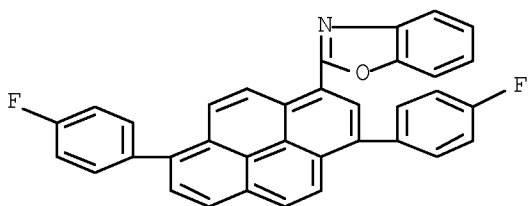
CAS Registry Number  
908011-79-0 CAPLUS

Chemical or Trade Name  
Benzoxazole, 2-(3,8-diphenyl-1-pyrenyl)-5-(4-fluorophenyl)- (CA INDEX NAME)



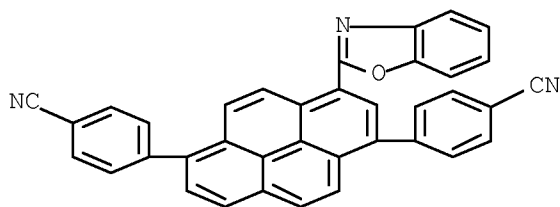
CAS Registry Number  
908011-81-4 CAPLUS

Chemical or Trade Name  
Benzoxazole, 2-[3,8-bis(4-fluorophenyl)-1-pyrenyl]- (CA INDEX NAME)



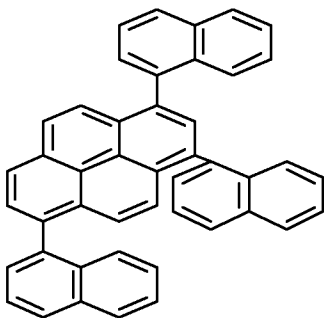
CAS Registry Number  
908011-83-6 CAPLUS

Chemical or Trade Name  
Benzonitrile, 4,4'-[3-(2-benzoxazolyl)-1,6-pyrenediyl]bis- (9CI) (CA INDEX NAME)



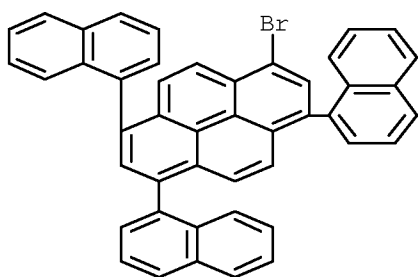
CAS Registry Number  
908011-90-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tri-1-naphthalenyl- (CA INDEX NAME)



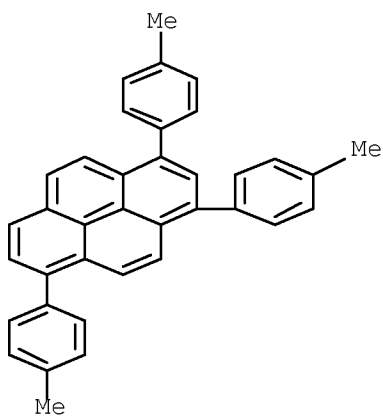
CAS Registry Number  
908011-91-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,6,8-tri-1-naphthalenyl- (CA INDEX NAME)



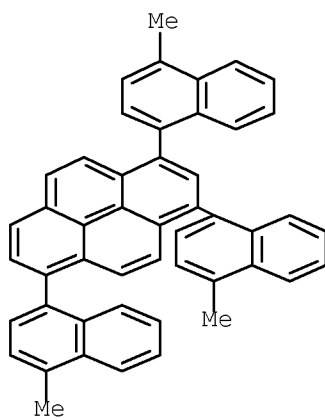
CAS Registry Number  
908011-84-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris(4-methylphenyl)- (CA INDEX NAME)



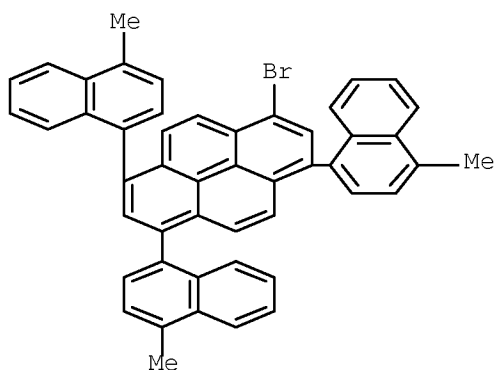
CAS Registry Number  
908011-85-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



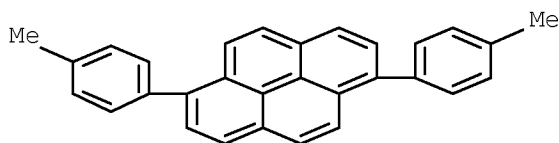
CAS Registry Number  
908011-86-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,6,8-tris(4-methyl-1-naphthalenyl)- (CA INDEX NAME)



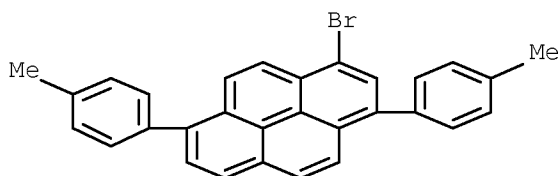
CAS Registry Number  
908011-87-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis(4-methylphenyl)- (CA INDEX NAME)



CAS Registry Number  
908011-88-1 CAPLUS

Chemical or Trade Name  
Pyrene, 3-bromo-1,6-bis(4-methylphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)

L5 ANSWER 18 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:566609 CAPLUS [Full-text](#)  
Document Number  
145:37063

Title  
Organic electroluminescent device  
Author/Inventor  
Kawamura, Hisayuki; Kubota, Mineyuki  
Patent Assignee/Corporate Source  
Idemitsu Kosan Co., Ltd., Japan

Source  
PCT Int. Appl., 70 pp. CODEN: PIXXD2

Document Type  
Patent

Language  
Japanese  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006062078	A1	20060615	WO 2005-JP22336	20051206
US 20070134511	A1	20070614	US 2005-296400	20051208

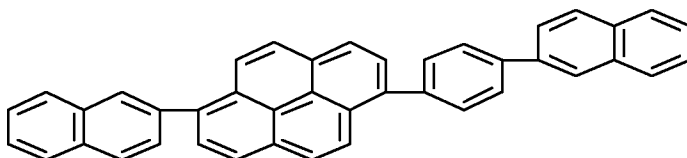
#### Abstract

Disclosed is an organic electroluminescent device comprising at least a pair of electrodes and a light-emitting layer interposed between them. This organic electroluminescent device is characterized in that the light-emitting layer contains a derivative which includes an asym. substituted anthracene as a partial structure and an amine derivative represented by the formula I, where Ar1-Ar4 resp. represent a substituted or unsubstituted aromatic ring having 6-50 nuclear carbon atoms; R1 and R2 represent substituents which may be the same as or different from each other, or they may combine together to form a saturated or unsatd. ring; and p represents an integer of 1-6.

# Hit Structure

CAS Registry Number  
888705-94-0 CAPLUS

Chemical or Trade Name  
Eylene, 1-(2-naphthalenyl)-6-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

.L5 ANSWER 19 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:538865 CAPLUS [Full-text](#)  
Document Number  
145:37410

Title  
Organic **electroluminescent** device  
Author/Inventor  
Kawamura, Hisayuki; Kubota, Mineyuki; Funahashi, Masakazu  
Patent Assignee/Corporate Source  
Idemitsu Kosan Co., Ltd., Japan  
Source  
PCT Int. Appl., 67 pp. CODEN: PIXXD2  
Document Type  
Patent  
Language  
Japanese  
Patent Information

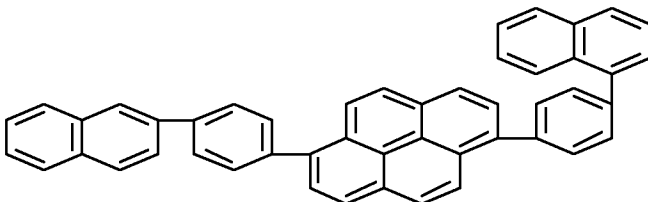
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006059512	A1	20060608	WO 2005-JP21469	20051122
JP 4653469	B2	20110316	JP 2004-348675	20041201
JP 2006156888	A	20060615		
CN 101069299	A	20071107	CN 2005-80041191	20051122
CN 100565964	C	20091202		
KR 2007091280	A	20070910	KR 2007-7012284	20070531

Abstract  
Disclosed is an organic **electroluminescent** device comprising at least an anode, a cathode and an organic **light-emitting** layer interposed between the electrodes, wherein the organic **light-emitting** layer contains one or more host materials, a hole-trapping dopant and an electron-trapping dopant. By having the hole-trapping dopant and the electron-trapping dopant coexist in the organic **light-emitting** layer, the organic **electroluminescent** device can have a longer life.

# Hit Structure

CAS Registry Number  
870774-17-7 CAPLUS

Chemical or Trade Name  
Eylene, 1-[4-(1-naphthalenyl)phenyl]-6-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

.L5 ANSWER 20 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:510707 CAPLUS [Full-text](#)  
Document Number  
145:17894

Title  
Pyrene compound and **light emitting** transistor device utilizing the same for **electroluminescent** display  
Author/Inventor  
Oyamada, Takahito; Uchiuzou, Hiroyuki; Adachi, Chihaya; Akiyama, Seiji; Takahashi, Takayoshi  
Patent Assignee/Corporate Source  
Kyoto University, Japan; Nippon Telegraph and Telephone Corporation; Pioneer Corporation; Hitachi, Ltd.; Mitsubishi Chemical Corporation; Rohm Co., Ltd.  
Source  
PCT Int. Appl., 47 pp. CODEN: PIXXD2  
Document Type  
Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057326	A1	20060601	WO 2005-JP21648	20051125
JP 2006176491	A	20060706	JP 2005-257934	20050906
EP 1816114	A1	20070808	EP 2005-809746	20051125
CN 101080376	A	20071128	CN 2005-80040407	20051125
KR 2007095300	A	20070928	KR 2007-7014327	20070622
US 20080105865	A1	20080508	US 2007-791674	20070806

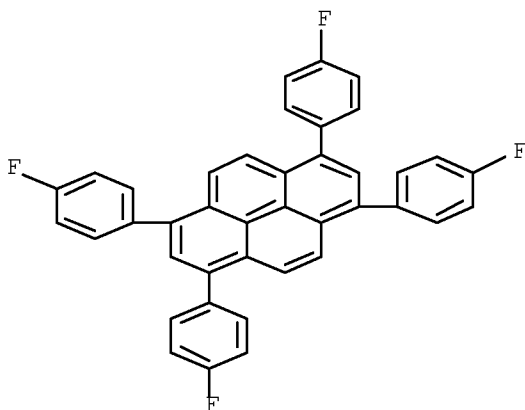
Abstract

A pyrene compound that when used in a **light emitting** transistor device, excels in both the properties of **light emission** and mobility; and a **light emitting** transistor device utilizing such a specified pyrene compound. As a main constituent of a luminescent layer of **light emitting** transistor device, use is made of a pyrene compound of the chemical formula I (R1 = heteroaryl, aryl (excluding Ph), C1-20-alkyl, alkenyl, alkynyl, silyl, halo).

Hit Structure

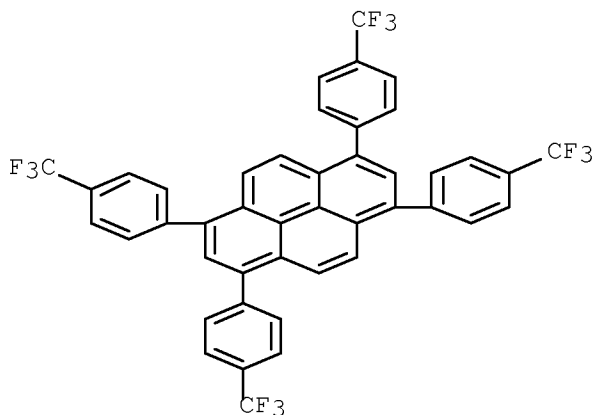
CAS Registry Number  
835878-24-5 CAPLUS

Chemical or Trade Name  
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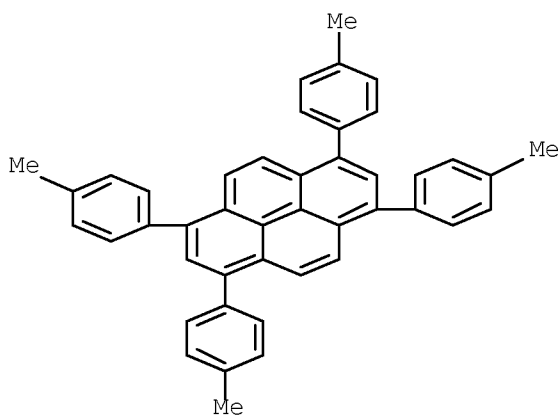
CAS Registry Number  
881853-23-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)



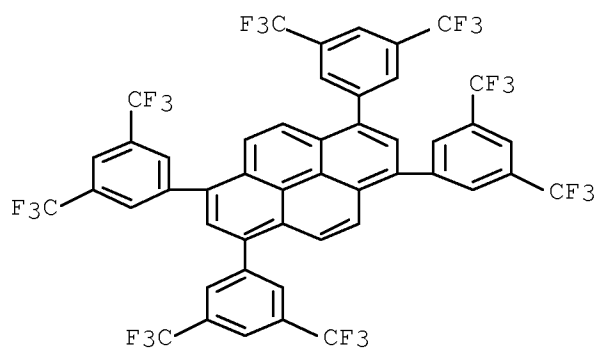
CAS Registry Number  
887909-71-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(4-methylphenyl)- (CA INDEX NAME)



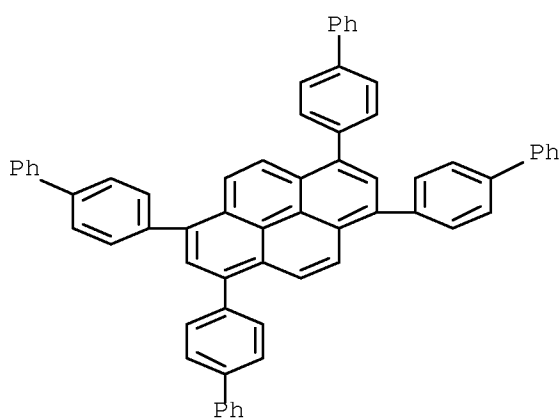
CAS Registry Number  
887909-73-1 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)



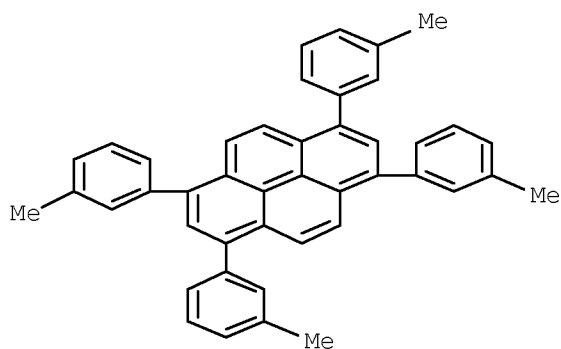
CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name  
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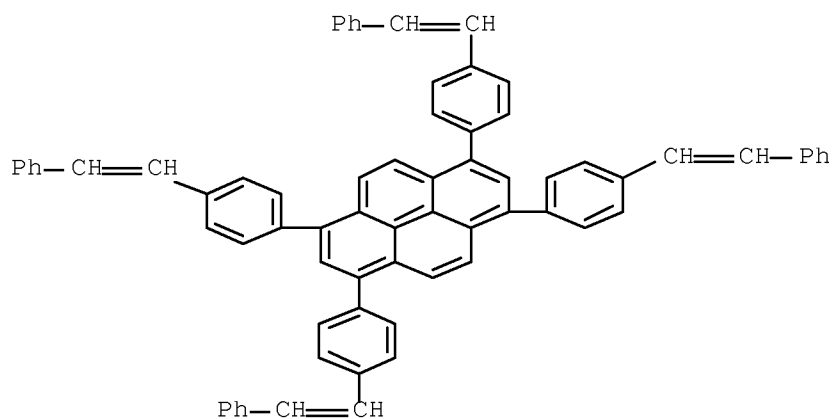
CAS Registry Number  
870133-71-4 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(3-methylphenyl)- (CA INDEX NAME)



CAS Registry Number  
887909-55-9 CAPLUS

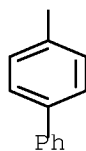
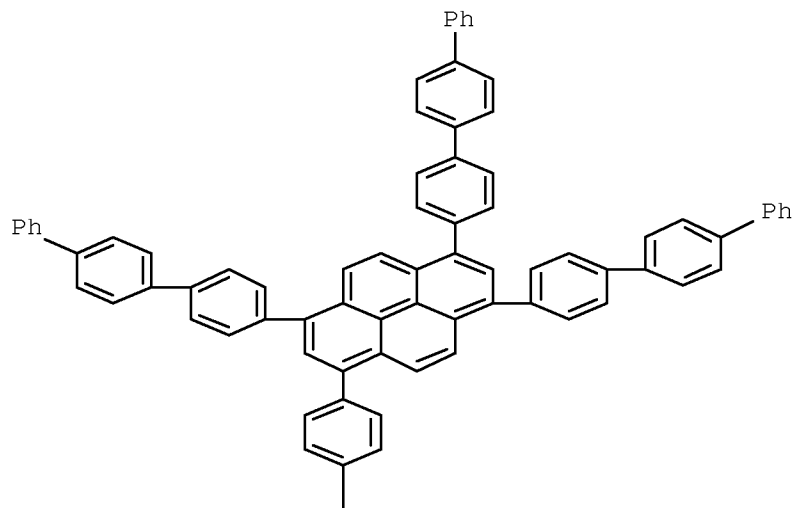
Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis[4-(2-phenylethenyl)phenyl]- (CA INDEX NAME)



CAS Registry Number  
887909-57-1 CAPLUS

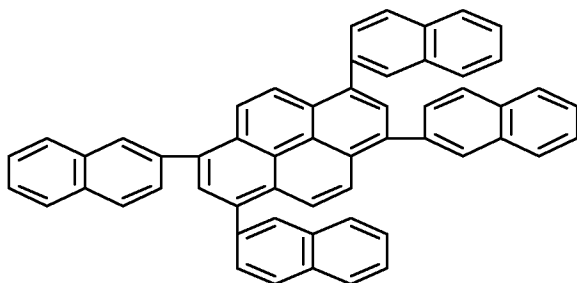
Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1':4',1''-terphenyl]-4-yl)- (9CI) (CA INDEX NAME)





CAS Registry Number  
887909-59-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetra-2-naphthalenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(8 CITINGS)

Accession Number

2006:510508 CAPLUS [Full-text](#)

Document Number

145:17891

Title

Pyrene compound and, utilizing the same, **light emitting** transistor device and **electroluminescence** device

Author/Inventor

Oyamada, Takahito; Uchiuzou, Hiroyuki; Adachi, Chihaya; Akiyama, Seiji; Takahashi, Takayoshi

Patent Assignee/Corporate Source

Kyoto University, Japan; Nippon Telegraph and Telephone Corporation; Pioneer Corporation; Hitachi, Ltd.; Mitsubishi Chemical Corporation; Rohm Co., Ltd.

Source

PCT Int. Appl., 66 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006057325	A1	20060601	WO 2005-JP21647	20051125
JP 2006176494	A	20060706	JP 2005-282590	20050928
EP 1818322	A1	20070815	EP 2005-809745	20051125
CN 101072743	A	20071114	CN 2005-80040399	20051125
KR 2007093401	A	20070918	KR 2007-7014336	20070622
US 20080012475	A1	20080117	US 2007-791613	20070806

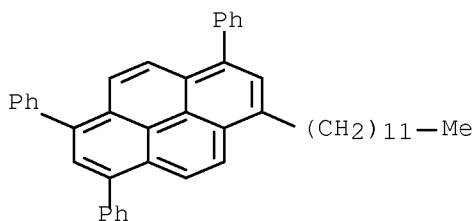
Abstract

An organic phosphor of the following formula I (R1 = heteroaryl, aryl, C1-20-alkyl, cycloalkyl, alkenyl, etc.; R2 = heteroalkyl, aryl, C1-20-alkyl, cycloalkyl, alkenyl, etc.; R1 ≠ R2) that can be used in both a **light emitting** transistor device and an organic EL device. There is provided a **light emitting** transistor device or an organic EL device, wherein luminescence of such a specified asym. pyrene compound is utilized in a **light emitting** layer of transistor device or a luminescent layer, hole transporting layer or electron transporting layer of organic **electroluminescence** device.

Hit Structure

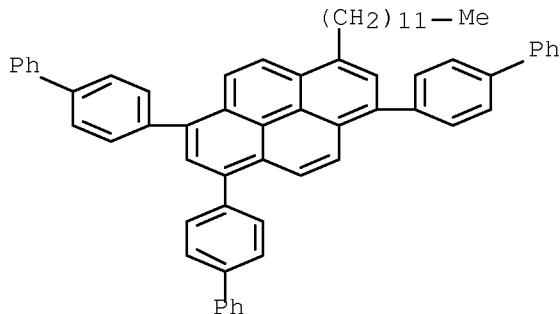
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887917-92-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1-dodecyl-3,6,8-triphenyl- (CA INDEX NAME)



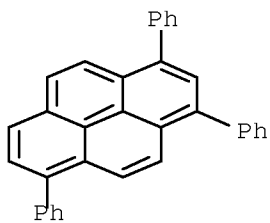
CAS Registry Number  
887917-94-4 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris([1,1'-biphenyl]-4-yl)-8-dodecyl- (CA INDEX NAME)



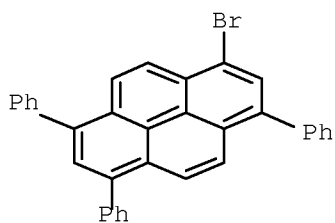
CAS Registry Number  
887918-05-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-triphenyl- (CA INDEX NAME)



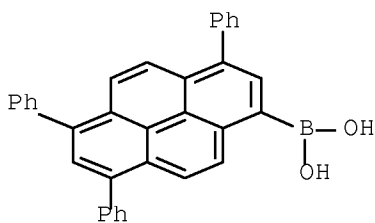
CAS Registry Number  
887918-07-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,6,8-triphenyl- (CA INDEX NAME)



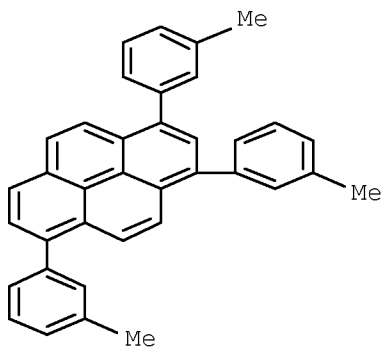
CAS Registry Number  
887918-18-5 CAPLUS

Chemical or Trade Name  
Boronic acid, B-(3,6,8-triphenyl-1-pyrenyl)- (CA INDEX NAME)



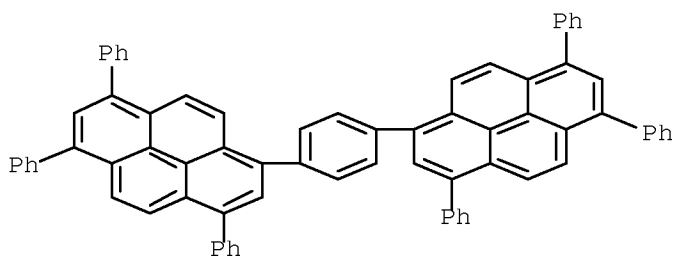
CAS Registry Number  
887918-26-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6-tris(3-methylphenyl)- (CA INDEX NAME)



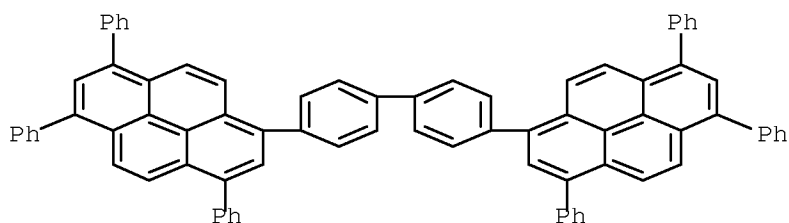
CAS Registry Number  
887918-30-1 CAPLUS





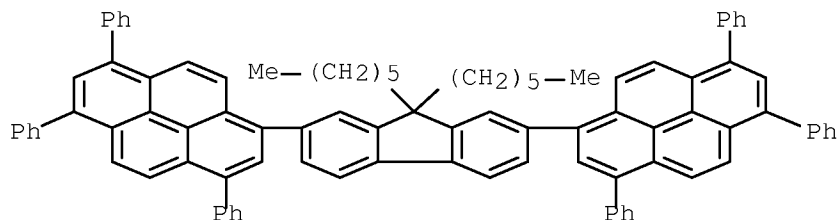
CAS Registry Number  
887918-12-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,1'-[1,1'-biphenyl]-4,4'-diylbis[3,6,8-triphenyl- (9CI) (CA INDEX NAME)



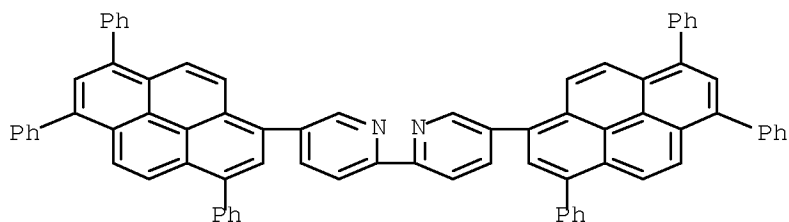
CAS Registry Number  
887918-16-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,1'-(9,9-dihexyl-9H-fluorene-2,7-diyl)bis[3,6,8-triphenyl- (CA INDEX NAME)



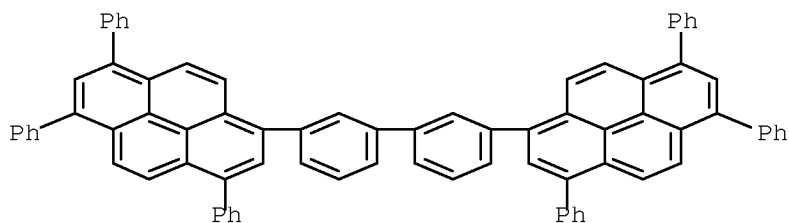
CAS Registry Number  
887918-21-0 CAPLUS

Chemical or Trade Name  
2,2'-Bipyridine, 5,5'-bis(3,6,8-triphenyl-1-pyrenyl)- (CA INDEX NAME)



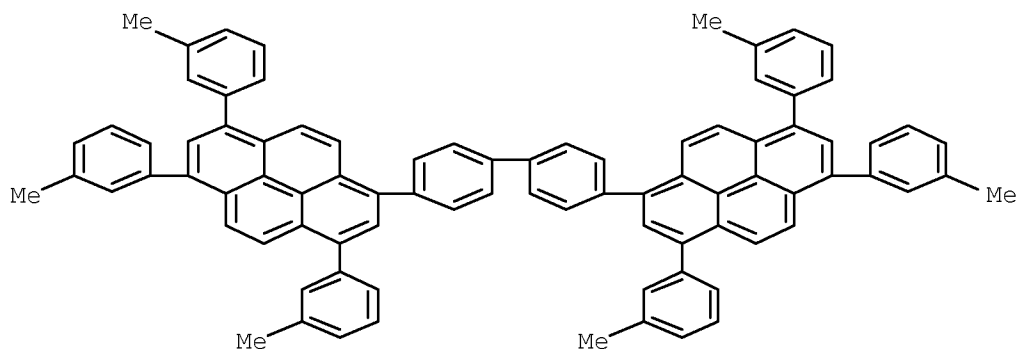
CAS Registry Number  
887918-23-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1,1'-[1,1'-biphenyl]-3,3'-diylbis[3,6,8-triphenyl- (9CI) (CA INDEX NAME)



CAS Registry Number  
887918-32-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,1'-[1,1'-biphenyl]-4,4'-diylbis[3,6,8-tris(3-methylphenyl)-  
(9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)

.L5 ANSWER 22 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2006:343128 CAPLUS [Full-text](#)  
Document Number  
144:391623

Title  
Electronic devices containing organic semiconductors with low halogen content  
Author/Inventor  
Spreitzer, Hubert; Falcou, Aurelie; Scheurich, Rene; Schulte, Niels; Buesing, Arne; Stoessel, Philipp  
Patent Assignee/Corporate Source  
Merck Patent GmbH, Germany  
Source  
PCT Int. Appl., 31 pp. CODEN: PIXXD2  
Document Type  
Patent  
Language  
German  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006037458	A1	20060413	WO 2005-EP10112	20050920
EP 1794218	A1	20070613	EP 2005-784377	20050920
JP 2008516421	T	20080515	JP 2007-533903	20050920
US 20080113468	A1	20080515	US 2007-664473	20070330

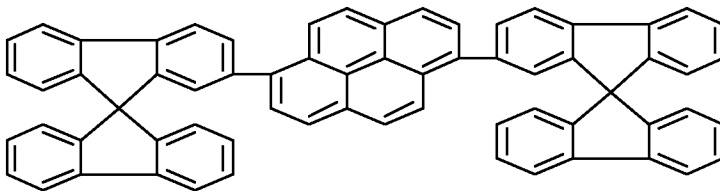
#### Abstract

The invention relates to electronic devices containing organic semiconductors with a halogen content < 20 ppm. As a result, the service life and efficiency of the corresponding electronic devices is increased, and such materials are more suitable for use in organic electronic devices than materials having higher halogen content. In one embodiment, low mol. weight organic or polymeric semiconductors are obtained by coupling reactions involving reactive halogens, followed by optional isolation of the semiconductors, and treatment with a reducing agent until the halogen content is < 20 ppm.

#### Hit Structure

CAS Registry Number  
723285-22-1 CAPLUS

Chemical or Trade Name  
9,9'-Spirobi[9H-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(9 CITINGS)

L5 ANSWER 23 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2006:13624 CAPLUS [Full-text](#)

Document Number

144:117443

Title

Organic **electroluminescent** device

Author/Inventor

Vestweber, Horst; Stoessel, Philipp; Gerhard, Anja; Parham, Amir

Patent Assignee/Corporate Source

Covion Organic Semiconductors G.m.b.H., Germany

Source

PCT Int. Appl., 36 pp. CODEN: PIXXD2

Document Type

Patent

Language

German

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006000388	A1	20060105	WO 2005-EP6727	20050622
DE 102004031000	A1	20060112	DE 2004-102004031000	20040626
EP 1761962	A1	20070314	EP 2005-753649	20050622
EP 1761962	B1	20100203		
JP 2008504381	T	20080214	JP 2007-517189	20050622
AT 457085	T	20100215	AT 2005-753649	20050622
US 20090159874	A1	20090625	US 2007-630637	20070130

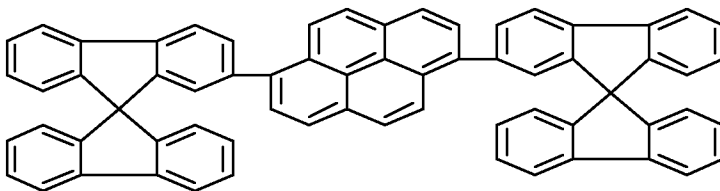
Abstract

Organic **electroluminescent** devices comprising a cathode, an anode, and  $\geq 1$  emitting layer are described in which the emitting layer comprises a host material 1-99.9 weight % and 0.1-99 weight % of a compound described by the general formula A(-X-C(R):C(Y)Z)<sub>3</sub> (A = N, P, As, Sb, P=O, P=S, As=O, As=S, Sb=O, or Sb=S; X = at each occurrence independently selected optionally substituted C2-60 bivalent (hetero)aryl groups; Y = at each occurrence independently selected optionally substituted C2-60 monovalent (hetero)aryl groups, with the restriction that Y does not incorporate any (un)substituted amino groups; Z = independently selected at each occurrence Y, -CN, or straight, branched, or cyclic optionally substituted C1-40 alkyl groups; R = at each occurrence independently selected from H, CN, straight, branched, or cyclic optionally substituted C1-40 alkyl groups). Compds. are also claimed in which the Y and Z groups are joined by a covalent bond or by a bivalent bridging group having up to 5 bridging atoms.

Hit Structure

CAS Registry Number  
723285-22-1 CAPLUS

Chemical or Trade Name  
9,9'-Spirobi[9H-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

L5 ANSWER 24 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1350075 CAPLUS [Full-text](#)

Document Number

144:69631

Title

Process for preparation of fluorene derivatives as organic **electroluminescent** devices

Author/Inventor

Ito, Mitsunori; Yamamoto, Hiroshi; Hachiya, Satoshi; Kawamura, Hisayuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 68 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005123634	A1	20051229	WO 2005-JP9024	20050518
CN 1842510	A	20061004	CN 2005-80001007	20050518
EP 1780191	A1	20070502	EP 2005-741059	20050518
US 20060159956	A1	20060720	US 2005-282640	20051121
US 7683225	B2	20100323		
KR 2007028284	A	20070312	KR 2006-7006217	20060330
IN 2006CN01079	A	20070817	IN 2006-CN1079	20060330
US 20080303433	A1	20081211	US 2008-178807	20080724
US 7781628	B2	20100824		
US 20100277063	A1	20101104	US 2010-838839	20100719

# Abstract

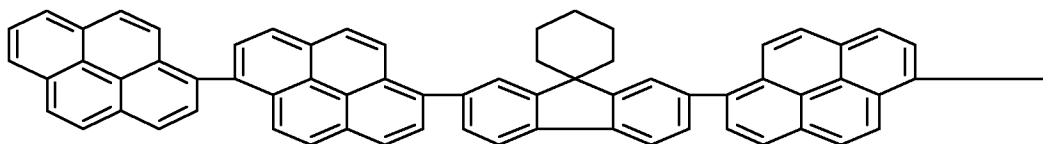
This invention pertains to a method for producing fluorene derivs. with general formula of (A-X)p-(FL-B)m-(Y-C)n [wherein p = 0-10; n = 0-10; p+n >1; m = 1-10; X and Y = independently a bond, (un)substituted aryl, alkylene, or alkenylene; A and C = independently (un)substituted aryl, heteroaryl, etc.; B = a bond, (un)substituted aryl, alkylene, or alkenylene; FL = (un)substituted fluorene]. For example, the compound 1 was prepared in a multi-step synthesis starting from 1-iodopyrene and 4-bromophenylboronic acid. Also disclosed is an organic electroluminescent device having high luminescent efficiency wherein an organic thin film layer composed of one or more layers including at least a **light-emitting** layer is interposed between a cathode and an anode.

# Hit Structure

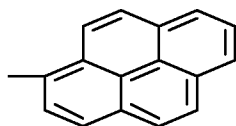
CAS Registry Number  
872050-46-9 CAPLUS

Chemical or Trade Name  
Spiro[cyclohexane-1,9'-[9H]fluorene], 2',7'-bis([1,1'-bipyren]-6-yl)-  
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)



\_L5 ANSWER 25 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1292773 CAPLUS [Full-text](#)

Document Number

144:42963

Title

Asymmetric pyrene derivative and organic **electroluminescent** device using same to improve luminous efficiency and long life

Author/Inventor

Kubota, Mineyuki; Funahashi, Masakazu; Hosokawa, Chishio

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 48 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005115950	A1	20051208	WO 2005-JP 8494	20050510
EP 1749809	A1	20070207	EP 2005-739101	20050510
CN 1960957	A	20070509	CN 2005-80017149	20050510
US 20060154107	A1	20060713	US 2005-282582	20051121
US 7763761	B2	20100727		
KR 2007029717	A	20070314	KR 2006-7024933	20061127
IN 2006CN04355	A	20070629	IN 2006-CN4355	20061127
US 20100308718	A1	20101209	US 2010-795216	20100607
JP 2011066446	A	20110331	JP 2010-277867	20101214

Abstract

Disclosed are asym. pyrene derivs. having substituents ((L)mAr)n and ((L')sAr')t (Ar, Ar' = C6-50-aromatic group; L, L' = phenylene, naphthalenylenes, fluorenylenes, dibenzosilolylene; m = 0-2; n = 1-4; s = 0-2; t = 0-4). An organic **electroluminescent** device comprising an organic thin film layer which is interposed between an anode and a cathode and composed of one or more layers including at least a **light-emitting** layer is also disclosed wherein the organic thin film layer contains at least one of the asym. pyrene derivs. by itself or as a component of a mixture. Such an organic **electroluminescent** device has high luminous efficiency and long life due to the asym. pyrene derivative.

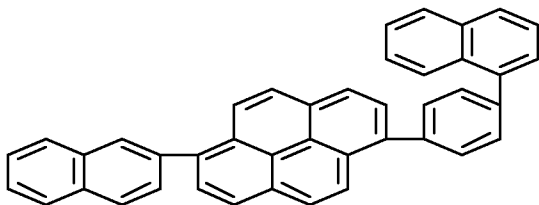
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CAS Registry Number

870774-21-3 CAPLUS

Chemical or Trade Name

Pyrene, 1-(2-naphthalenyl)-6-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)

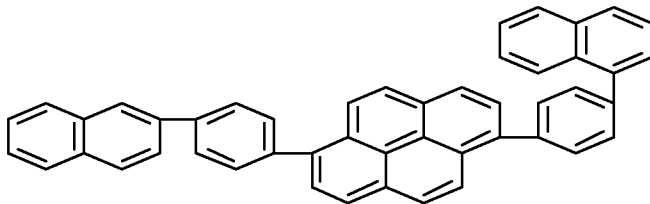


CAS Registry Number

870774-17-7 CAPLUS

Chemical or Trade Name

Pyrene, 1-[4-(1-naphthalenyl)phenyl]-6-[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)

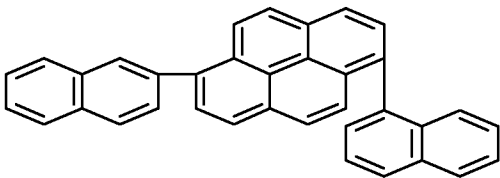


CAS Registry Number

870774-18-8 CAPLUS

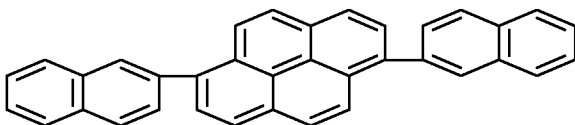
Chemical or Trade Name

Pyrene, 1-(1-naphthalenyl)-6-(2-naphthalenyl)- (CA INDEX NAME)



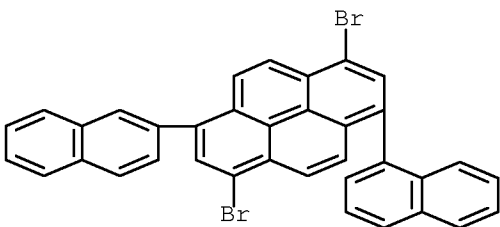
CAS Registry Number  
663954-28-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



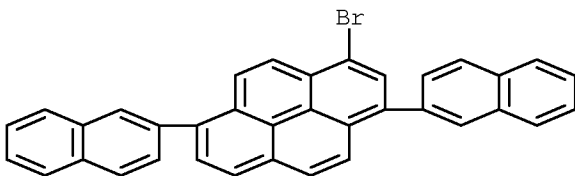
CAS Registry Number  
870774-32-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3-(1-naphthalenyl)-8-(2-naphthalenyl)- (CA INDEX NAME)



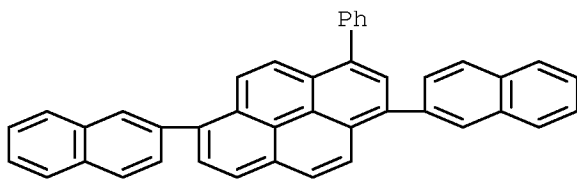
CAS Registry Number  
870774-33-7 CAPLUS

Chemical or Trade Name  
Pyrene, 3-bromo-1,6-di-2-naphthalenyl- (CA INDEX NAME)



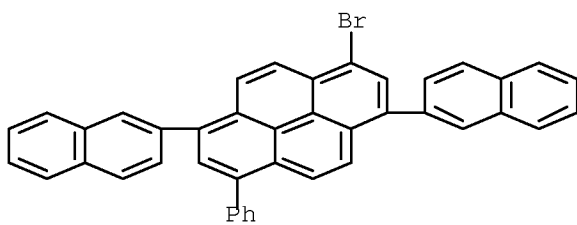
CAS Registry Number  
870774-34-8 CAPLUS

Chemical or Trade Name  
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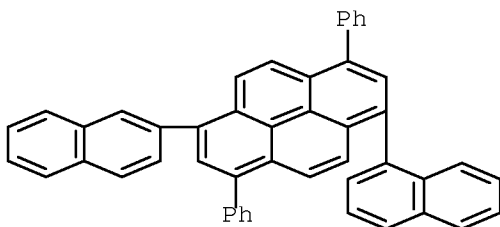
CAS Registry Number  
870774-35-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1-bromo-3,8-di-(2-naphthalenyl)-6-phenyl- (CA INDEX NAME)



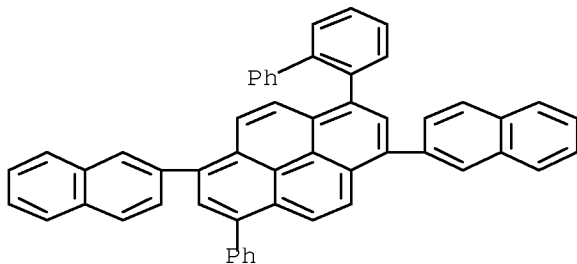
CAS Registry Number  
870774-23-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1-(1-naphthalenyl)-6-(2-naphthalenyl)-3,8-diphenyl- (CA INDEX NAME)



CAS Registry Number  
870774-24-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1-[1,1'-biphenyl]-2-yl-3,8-di-(2-naphthalenyl)-6-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

143:459885

Title

Process for preparation of 1,6-dihalopyrene derivatives

Author/Inventor

Funahashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 34 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005108335	A1	20051117	WO 2004-JP14016	20040917
EP 1746080	A1	20070124	EP 2004-773400	20040917
CN 1953951	A	20070425	CN 2004-80042997	20040917
US 20080015399	A1	20080117	US 2006-568578	20061102
KR 2007011460	A	20070124	KR 2006-7023411	20061108
IN 2006CN04133	A	20070615	IN 2006-CN4133	20061110

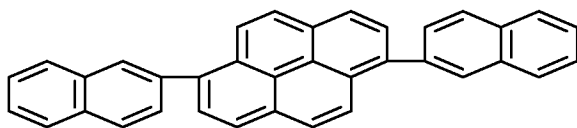
Abstract

This invention pertains to a method for producing 1,6-disubstituted 3,8-dihalopyrene derivs. represented by the following general formula I [wherein R1 and R2 = independently (un)substituted alkyl, aryl, aralkyl, cycloalkyl, alkoxy, aryloxy, halo, cyano, or silyl; and X = halo]. For example, 1,6-dibromopyrene was reacted with isopropylmagnesium bromide in 1,4-dioxane in the presence of dichloro(diphenylphosphinoferrocene)palladium to give 1,6-diisopropylpyrene (31%). 1,6-Diisopropylpyrene was then treated with NBS in DMF to afford 1,6-dibromo-3,8-diisopropylpyrene (28%). I are useful as an intermediate for dyes, etc., especially as an intermediate for a charge-transporting material for electrophotoreceptors, material for organic electroluminescent elements, and hole-transporting material or luminescent material for organic electroluminescent elements.

Hit Structure

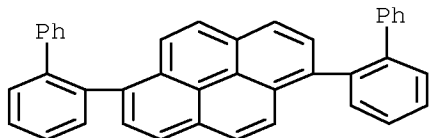
CAS Registry Number  
663954-28-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



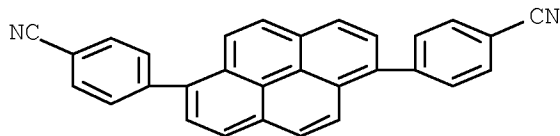
CAS Registry Number  
869340-09-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-2-yl)- (CA INDEX NAME)



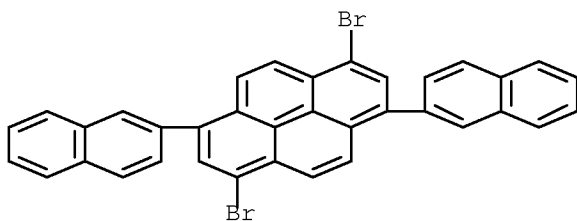
CAS Registry Number  
869340-10-3 CAPLUS

Chemical or Trade Name  
Benzonitrile, 4,4'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



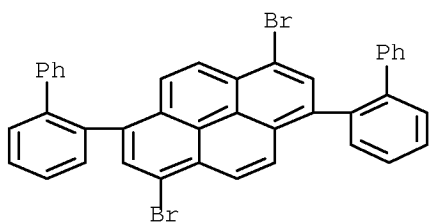
CAS Registry Number  
869340-04-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3,8-di-2-naphthalenyl- (CA INDEX NAME)



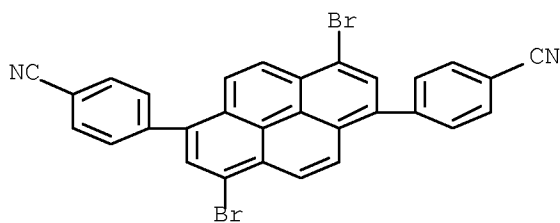
CAS Registry Number  
869340-05-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-2-yl)-3,8-dibromo- (CA INDEX NAME)



CAS Registry Number  
869340-06-7 CAPLUS

Chemical or Trade Name  
Benzonitrile, 4,4'-(3,8-dibromo-1,6-pyrenediyl)bis- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)

L5 ANSWER 27 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1220376 CAPLUS FullText

Document Number

143:485899

Title

Aromatic amine derivative, organic electroluminescent element employing the same, and process for producing aromatic amine derivative

Author/Inventor

Funahashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 87 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005108348	A1	20051117	WO 2004-JP14020	20040917
EP 1746085	A1	20070124	EP 2004-773404	20040917
CN 1953960	A	20070425	CN 2004-80042994	20040917
JP 4188401	B2	20081126	JP 2006-512914	20040917
KR 2007011484	A	20070124	KR 2006-7023676	20061110
IN 2006CN04140	A	20070615	IN 2006-CN4140	20061110
US 20070252511	A1	20071101	US 2006-596299	20061113

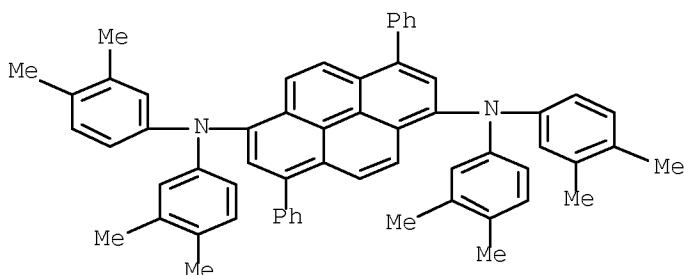
Abstract

An aromatic amine derivative having a specific structure comprising a substituted pyrene structure and a substituted diphenylamino group bonded thereto; an organic **electroluminescent** element comprising a cathode, an anode, and an organic thin film layer sandwiched therebetween which is composed of one or more layers comprising a luminescent layer, wherein at least one layer of the organic thin film layer consists of the aromatic amine derivative alone or contains the derivative as a component of a mixture; and a process for producing the aromatic amine derivative. The organic **electroluminescent** element has a long life and a high luminescent efficiency and emits a blue color. The aromatic amine derivative realizes the element.

#### Hit Structure

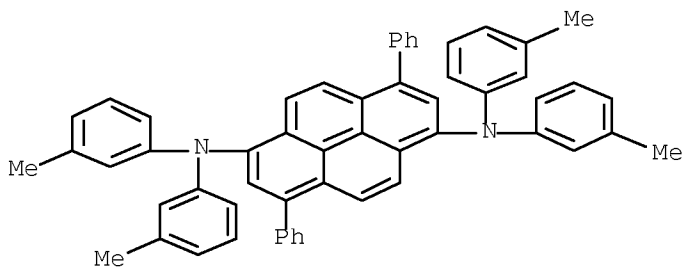
CAS Registry Number  
764657-27-4 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)-3,8-diphenyl-  
(CA INDEX NAME)



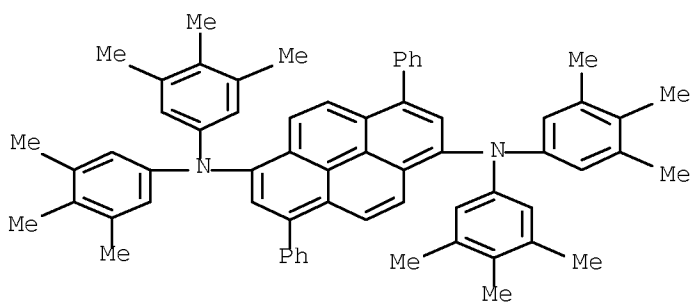
CAS Registry Number  
869496-83-3 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3-methylphenyl)-3,8-diphenyl- (CA  
INDEX NAME)



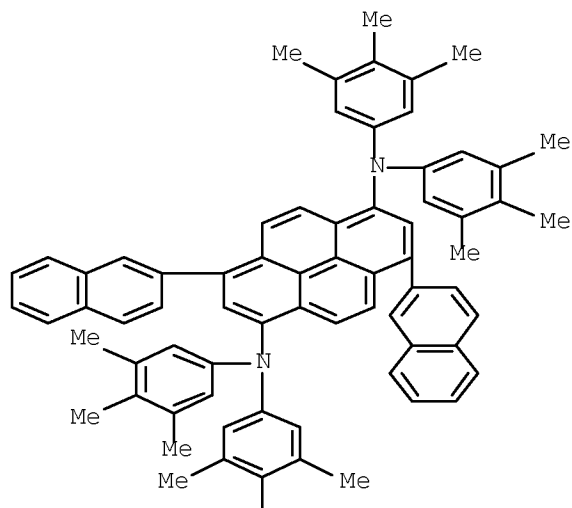
CAS Registry Number  
869496-84-4 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediamine, 3,8-diphenyl-N1,N1,N6,N6-tetrakis(3,4,5-trimethylphenyl)-  
(CA INDEX NAME)



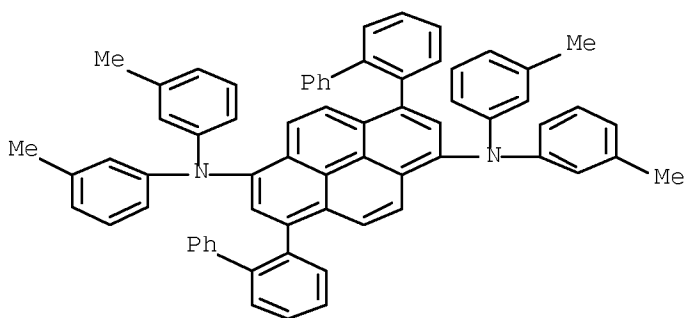
CAS Registry Number  
869496-89-9 CAPLUS

Chemical or Trade Name  
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(CA INDEX NAME)



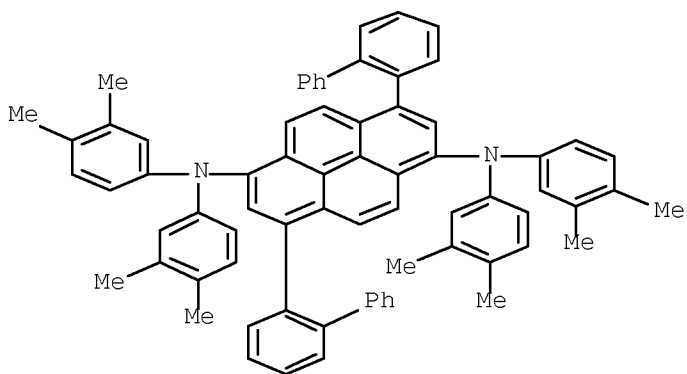
CAS Registry Number  
869496-85-5 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediimine, 3,8-bis([1,1'-biphenyl]-2-yl)-N1,N1,N6,N6-tetrakis(3-methylphenyl)- (CA INDEX NAME)



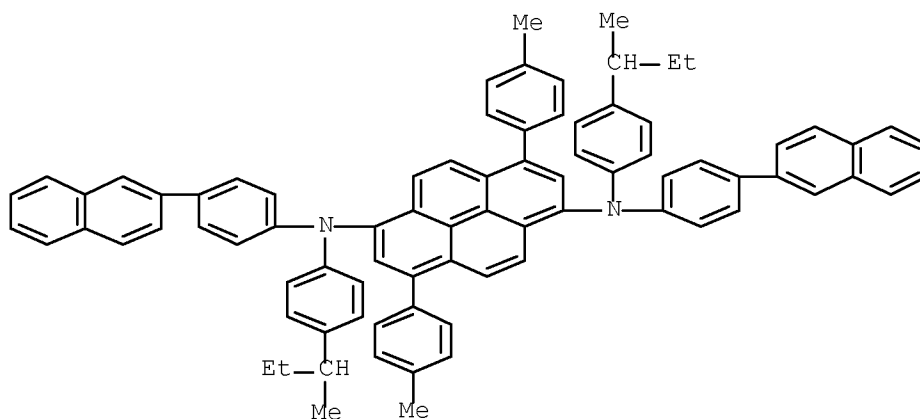
CAS Registry Number  
869496-86-6 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediimine, 3,8-bis([1,1'-biphenyl]-2-yl)-N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)- (CA INDEX NAME)



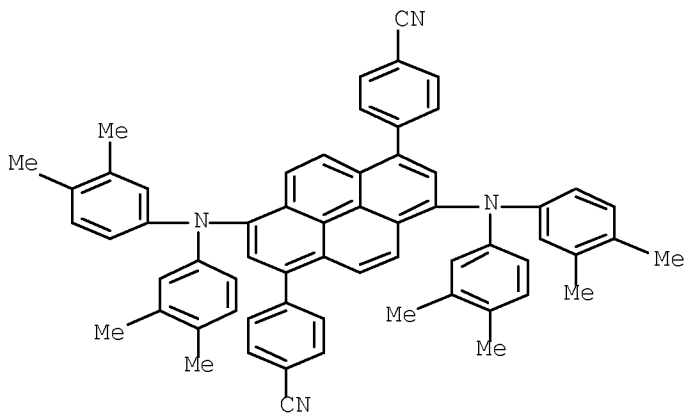
CAS Registry Number  
869496-87-7 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediimine, 3,8-bis[4-(2-methylphenyl)phenyl]-N1,N6-bis[4-(1-methylpropyl)phenyl]-N1,N6-bis[4-(2-naphthalenyl)phenyl]- (CA INDEX NAME)



CAS Registry Number  
869496-88-8 CAPLUS

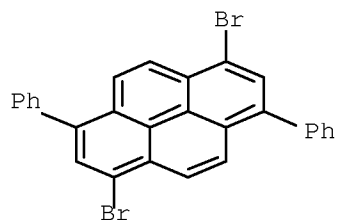
Chemical or Trade Name  
Benzonitrile, 4,4'-[3,8-bis[bis(3,4-dimethylphenyl)amino]-1,6-pyrenediyl]bis- (9CI) (CA INDEX NAME)





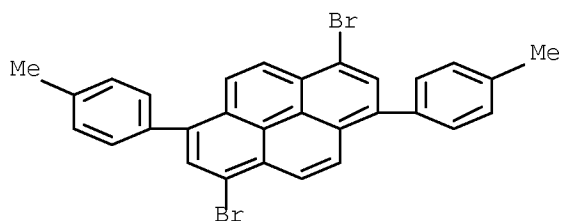
CAS Registry Number  
764657-28-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3,8-diphenyl- (CA INDEX NAME)



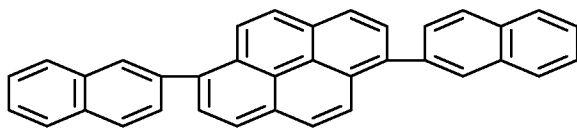
CAS Registry Number  
869496-93-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3,8-bis(4-methylphenyl)- (CA INDEX NAME)



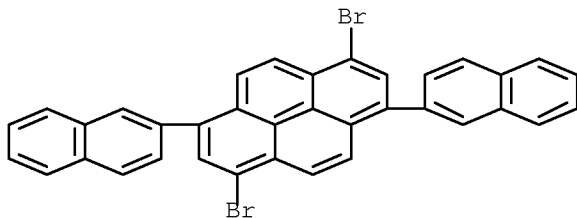
CAS Registry Number  
663954-28-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



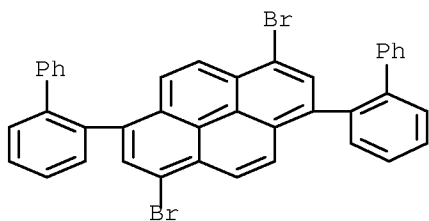
CAS Registry Number  
869340-04-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3,8-di-2-naphthalenyl- (CA INDEX NAME)



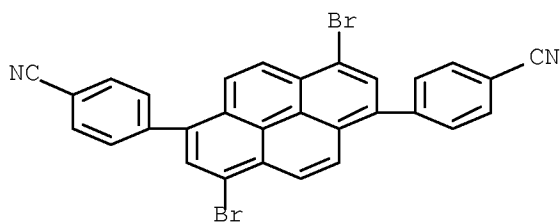
CAS Registry Number  
869340-05-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-2-yl)-3,8-dibromo- (CA INDEX NAME)



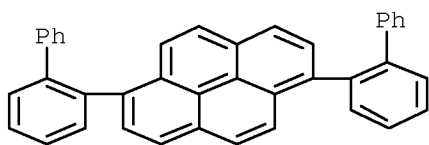
CAS Registry Number  
869340-06-7 CAPLUS

Chemical or Trade Name  
Benzonitrile, 4,4'-(3,8-dibromo-1,6-pyrenediyl)bis- (CA INDEX NAME)



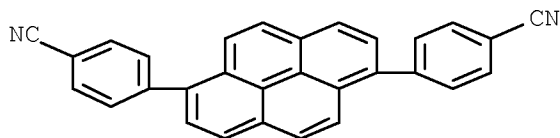
CAS Registry Number  
869340-09-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-2-yl)- (CA INDEX NAME)



CAS Registry Number  
869340-10-3 CAPLUS

Chemical or Trade Name  
Benzonitrile, 4,4'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD  
(23 CITINGS)

.L5 ANSWER 28 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1193684 CAPLUS [Full-text](#)

Document Number

143:449114

Title

Organic **electroluminescent** device containing metal element and its fabrication process

Author/Inventor

Itai, Yuichiro; Nakayama, Masaya

Patent Assignee/Corporate Source

Fujitsu Limited, Japan

Source

PCT Int. Appl., 28 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005107329	A1	20051110	WO 2004-JP6047	20040427
CN 1977567	A	20070606	CN 2004-80042888	20040427
CN 100581309	C	20100113		
US 20070231597	A1	20071004	US 2006-587692	20061026
US 7737632	B2	20100615		
KR 2007015438	A	20070202	KR 2006-7024598	20061123
KR 832763	B1	20080527		
US 20100216269	A1	20100826	US 2010-771127	20100430

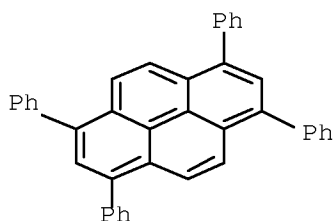
#### Abstract

The invention relates to an organic **electroluminescent** device (EL) comprising a pos. electrode and a neg. electrode and, interposed there-between, a laminate structure of organic films including at least a luminescent layer, a hole transport layer adjacent to the pos. electrode side of the luminescent layer and an electron transport layer adjacent to the neg. electrode side of the luminescent layer, wherein at least one of the organic films constituting the laminate structure contains a metal element exhibiting reactivity with water or oxygen.

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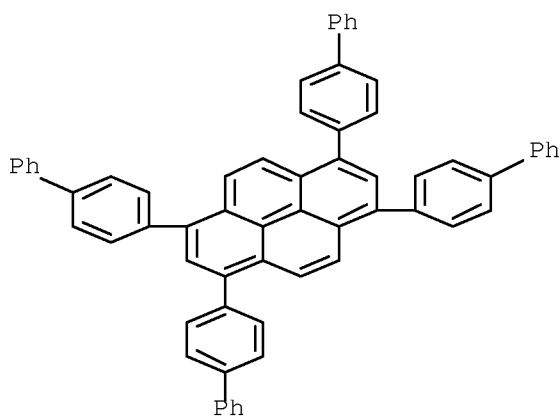
CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



Accession Number

2005:1175780 CAPLUS [Full-text](#)

Document Number

143:442452

Title

**Electroluminescent fluorinated pyrenes and LED devices made with such compounds.**

Author/Inventor

Ionkin, Alex Sergey; Wang, Ying

Patent Assignee/Corporate Source

E.I. Du Pont De Nemours and Company, USA

Source

U.S. Pat. Appl. Publ., 11 pp. CODEN: USXXCO

Document Type

Patent

Language

English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050244645	A1	20051103	US 2004-833787	20040428
US 7358406	B2	20080415		

Abstract

Fluorinated pyrenes I (R = H or fluoro- or fluoroalkyl-substituted aryl group) prepared by Suzuki coupling from chloro-substituted pyrenes and fluoro-derivs. of arylboronic acid are used in an active layer of LED sandwiched between two elec. contact layers. Thus, 1,3,6,8-tetrakis-[3,5-trifluoromethyl]phenyl]pyrene prepared by mixing 3.95 g of 1,3,6,8-tetrachloropyrene, 15.0 g of 3,5-bis(trifluoromethyl)phenylboronic acid, 1.33 g of tris(dibenzylideneacetone)dipalladium, 0.64 g of bis(1,1-dimethylethyl)trimethylsilylmethylphosphine, 18.95 g of cesium carbonate and 100 mL of dioxane 24 h at room temperature having quantum yield of fluorescence >0.6 was used in OLED devices fabricated by the thermal evaporation using ITO coated glass substrate, triphenylamine dye MPMP as a hole transport material, electron transport material, Al-complex as an electron injection material and carbazole biphenyl as a host material.

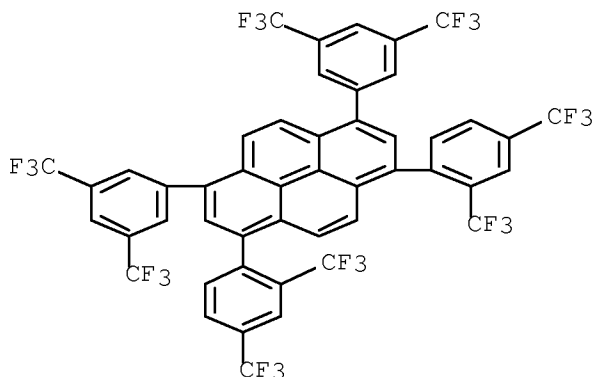
Hit Structure

CAS Registry Number

868555-69-5 CAPLUS

Chemical or Trade Name

Pyrene, 1,8-bis[2,4-bis(trifluoromethyl)phenyl]-3,6-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

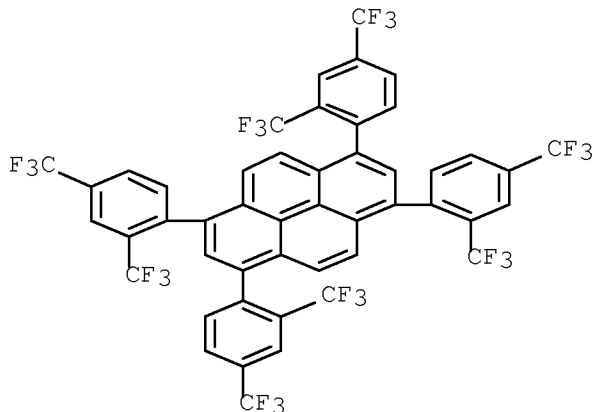


CAS Registry Number

868555-70-8 CAPLUS

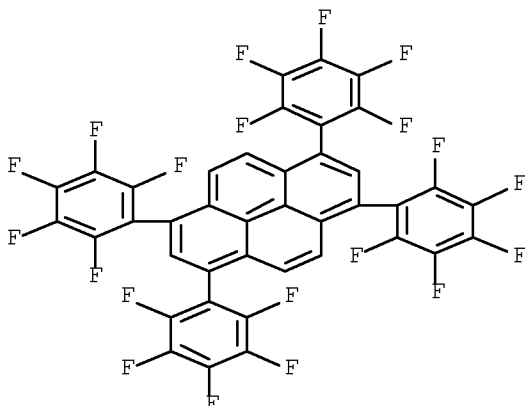
Chemical or Trade Name

Pyrene, 1,3,6,8-tetrakis[2,4-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)



CAS Registry Number  
86855-71-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(2,3,4,5,6-pentafluorophenyl)- (CA INDEX NAME)



L5 ANSWER 30 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2005:1155359 CAPLUS [Full text](#)

Document Number  
143:413225

Title  
Preparation of silylated pyrenes and their use in active layers of **electroluminescent** devices

Author/Inventor  
Ionkin, Alex Sergey; Wang, Ying

Patent Assignee/Corporate Source  
E. I. Du Pont De Nemours and Company, USA

Source  
U.S. Pat. Appl. Publ., 9 pp. CODEN: USXXCO

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050238910	A1	20051027	US 2004-831845	20040426
US 7233019	B2	20070619		

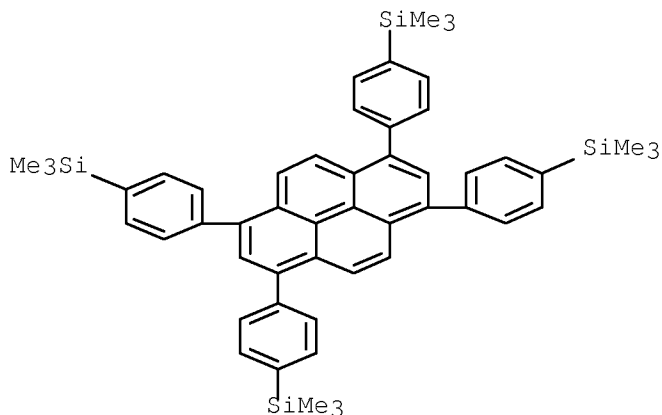
#### Abstract

This invention relates to **electroluminescent** silylated pyrene compds. It also relates to electronic devices in which the active layer includes an **electroluminescent** silylated pyrene compound. Thus, e.g., Suzuki coupling of 1,3,6,8-tetrachloropyrene with 3-(trimethylsilyl)phenylboronic acid in presence of Pd2dba3, tert-Bu2PCH2SiMe3 (preparation given), and Cs2CO3 in dioxane afforded 12.68% 1,3,6,8-tetrakis[3-(trimethylsilyl)phenyl]pyrene that exhibited an emission maximum at 420 nm in CH2Cl2 and that was fabricated into an OLED as emitter with peak efficiency of 0.6 cd/A, peak radiance 700 cd/m2, and peak  $\lambda$ 's of 450 and 490 nm.

#### Hit Structure

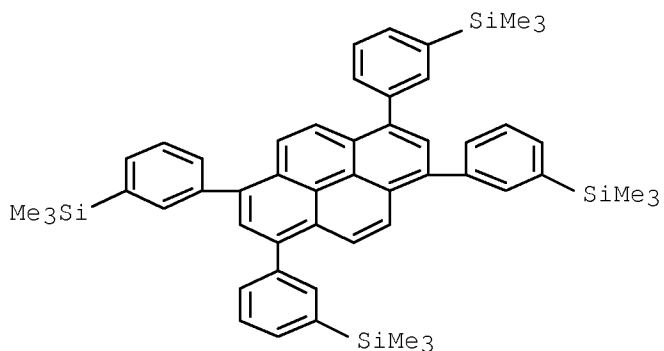
CAS Registry Number  
867058-49-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis[4-(trimethylsilyl)phenyl]- (CA INDEX NAME)



CAS Registry Number

Chemical or Trade Name	
Pyrene, 1,3,6,8-tetrakis[3-(trimethylsilyl)phenyl]-	(CA INDEX NAME)



Accession Number  
2005:1154873 CAPLUS Full-text  
Document Number  
143:429826

Author/Inventor  
Itai, Yuichiro  
Patent Assignee/Corporate Source  
Fujitsu Limited, Japan

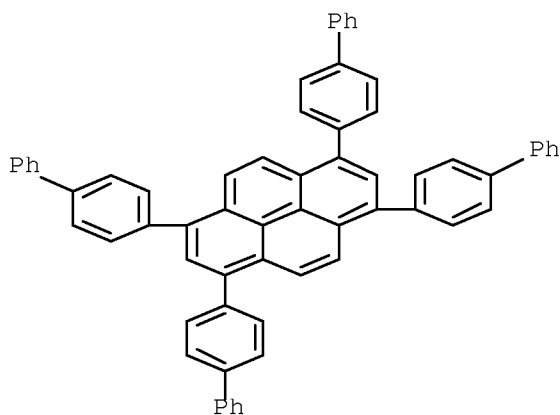
Patent  
Language  
Japanese  
Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005101911	A1	20051027	WO 2004-JP4662	20040331
TW 252051	B	20060321	TW 2004-108675	20040330
JP 4438003	B2	20100324	JP 2006-512162	20040331
US 20070285005	A1	20071213	US 2007-594600	20070608
US 7871711	B2	20110118		

An organic **electroluminescent** (EL) device comprises an anode, a hole injection layer, a hole transport layer, a blue **light-emitting** layer, a hole blocking layer, an electron transport layer, and a cathode formed sequentially on a glass substrate wherein the chromaticity of blue is enhanced while prolonging the lifetime by composing the electron transport layer of an electron transport material and a **light-emitting** material having a peak wavelength of emission spectrum longer than 555 nm, consuming holes by the **light-emitting** material and suppressing deterioration of the electron transport material.

CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



, L5 ANSWER 32 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1153554 CAPLUS [Full Text](#)

Document Number

143:429803

Title

Organic **electroluminescent** device

Author/Inventor

Funabashi, Masakazu

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

Jpn. Kokai Tokkyo Koho, 28 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005302667	A	20051027	JP 2004-120823	20040415
WO 2005101913	A1	20051027	WO 2005-JP6898	20050408
EP 1737277	A1	20061227	EP 2005-728719	20050408
CN 1943278	A	20070404	CN 2005-80011361	20050408
US 20070202354	A1	20070830	US 2006-547233	20061003
IN 2006CN03792	A	20070622	IN 2006-CN3792	20061012
KR 2007004843	A	20070109	KR 2006-7021357	20061013

Abstract

The invention relates to an organic **electroluminescent** device comprising an **electroluminescent** layer sandwiched between a pair of electrodes, wherein the **electroluminescent** layer comprises C10-100 aryl amine and a condensed ring-containing substance represented by (Ar)<sup>1</sup>-L [Ar = C6-30 aromatic hydrocarbon and C3-30 aromatic heterocyclic; a = 2-6 integer; L = a valent condensed polycyclic aromatic residue].

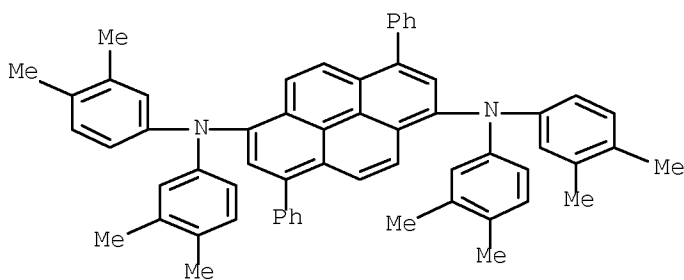
Hit Structure

CAS Registry Number

764657-27-4 CAPLUS

Chemical or Trade Name

1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)-3,8-diphenyl-  
(CA INDEX NAME)

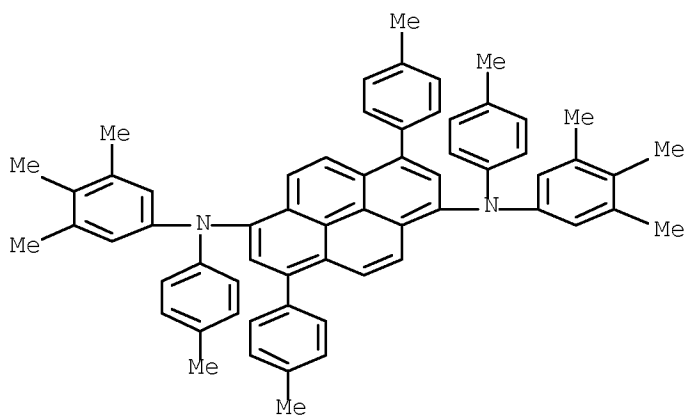


CAS Registry Number

868273-29-4 CAPLUS

Chemical or Trade Name

1,6-Pyrenediamine, N1,N6,3,8-tetrakis(4-methylphenyl)-N1,N6-bis(3,4,5-trimethylphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)



\_L5 ANSWER 33 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1144923 CAPLUS [Full-text](#)

Document Number

144:29415

Title

Lateral organic **light-emitting** diode with field-effect transistor characteristics

Author/Inventor

Oyamada, Takahito; Uchiuzou, Hiroyuki; Akiyama, Seiji; Oku, Yoshiaki; Shimoji, Noriyuki; Matsushige, Kazumi; Sasabe, Hiroyuki; Adachi, Chihaya

Patent Assignee/Corporate Source

Department of Photonics Materials Science, Chitose Institute of Science and Technology (CIST), 758-65 Bibi, Chitose, Hokkaido, 066-8655, Japan

Source

Journal of Applied Physics (2005), 98(7), 074506/1-074506/7 CODEN: JAPIAU; ISSN: 0021-8979

Document Type

Journal

Language

English

Abstract

Bright **electroluminescence** (EL) was observed from 1%-rubrene doped tetraphenylpyrene (TPPy) as an active layer in a lateral organic LED structure that allowed FET operation. This device configuration provides an organic LED structure where the anode (source) and cathode (drain) electrodes are laterally arranged, providing one a chance to control the EL intensity by changing the gate bias. TPPy provides compatible transistor and EL characteristics. Rubrene doping into the TPPy host and adjusting the source-drain channel length significantly improved the EL characteristics. A maximum EL quantum efficiency ( $\eta_{\text{ext}}$ ) of .apprx.0.5% was observed with a Cr/Au source (S)-drain (D) electrode and a slightly higher  $\eta_{\text{ext}}$  of .apprx.0.8% with S-D electrodes of MgAu/Au, Al/Au, Cr/YAu/Au, and MgAl/Au multilayers, aiming for simultaneous hole and electron injection.

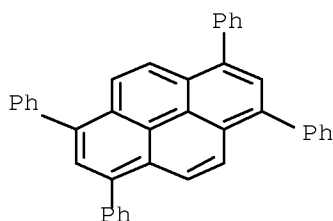
Hit Structure

CAS Registry Number

13638-82-9 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

\_L5 ANSWER 34 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:1042257 CAPLUS [Full-text](#)

Document Number

143:347290

Title

Preparation of polycyclic hydrocarbon organosilanes, process for production of the same, and use thereof

Author/Inventor

Nakagawa, Masatoshi; Hanato, Hiroyuki; Tamura, Toshihiro; Imada, Hiroshi

Patent Assignee/Corporate Source

Sharp Kabushiki Kaisha, Japan

Source

PCT Int. Appl., 131 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090365	A1	20050929	WO 2005-JP4658	20050316
JP 2005263721	A	20050929	JP 2004-80333	20040319
JP 2005268100	A	20050929	JP 2004-80375	20040319
JP 4416546	B2	20100217		
JP 2006062964	A	20060309	JP 2004-243508	20040824
JP 2005298485	A	20051027	JP 2005-67516	20050310
CN 1950382	A	20070418	CN 2005-80014402	20050316
JP 2005298496	A	20051027	JP 2005-79667	20050318
JP 4612443	B2	20110112		
US 20080207864	A1	20080828	US 2008-593204	20080318

Abstract

Organosilanes represented by the general formula (T)<sub>k</sub>-SiX<sub>1</sub>X<sub>2</sub>X<sub>3</sub> [wherein T is an organic group derived from a fused polycyclic hydrocarbon constituted of two to ten 5- and/or 6-membered monocyclic hydrocarbons, e.g. Q, Q1, Q2, and Q3 (wherein n1 is an integer of 0 to 10; n2 and n3 are an integer of ≥0 and the sum of n2 and n3 is 1 to 9) k is an integer of 1 to 10; and at least one of X1 to X3 is a group capable of giving hydroxyl through hydrolysis or halogeno, and the others are each a group inert to the adjacent mols.] are prepared. Organic thin films of organosilanes and organic thin film transistor and organic **electroluminescent** device fabricated from organic thin films using organosilanes are also disclosed. Thus, 6-bromo-2,2';6',2''-ternaphthalene was treated with Mg at 60° for 1 h in THF to give the Grignard reagent which was reacted with chlorotriethoxysilane at 60° for 2 h to give 40% 6-(triethoxysilyl)-2,2';6',2''-ternaphthalene (I). A 2 mM solution of 3-[di(tert-butyl)(methoxy)silyl]-9-(diphenylmethyl)pentacene (II) (preparation given) in CHCl<sub>3</sub> (100 μL) was added dropwise to water to form a monomol. layer on the water surface which was transferred on a substrate to form a Langmuir-Blodgett film (LB) film (average thickness .apprx.2.0 nm of monomol. layer).

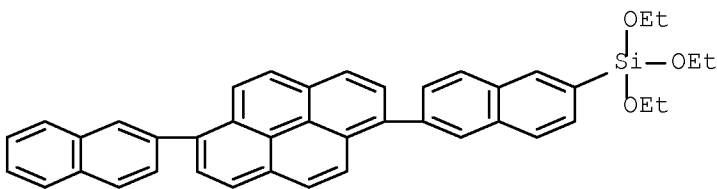
Hit Structure

CAS Registry Number

865648-06-2 CAPLUS

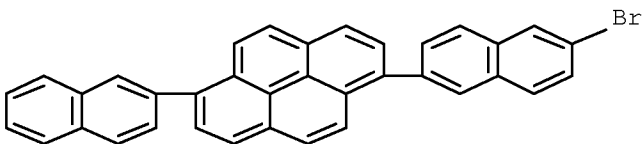
Chemical or Trade Name

Pyrene, 1-(2-naphthalenyl)-6-[6-(triethoxysilyl)-2-naphthalenyl]- (CA INDEX NAME)



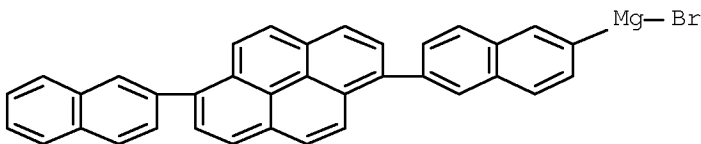
CAS Registry Number  
865648-04-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1-(6-bromo-2-naphthalenyl)-6-(2-naphthalenyl)- (CA INDEX NAME)



CAS Registry Number  
865648-05-1 CAPLUS

Chemical or Trade Name  
Magnesium, bromo[6-[6-(2-naphthalenyl)-1-pyrenyl]-2-naphthalenyl]- (9CI)  
(CA INDEX NAME)



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD  
(14 CITINGS)

L5 ANSWER 35 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2005:962579 CAPLUS [Full-text](#)  
Document Number  
143:256816

Title  
White organic electroluminescence device  
Author/Inventor  
Tokairin, Hiroshi; Fukuoka, Kenichi; Kubota, Mineyuki; Funahashi, Masakazu  
Patent Assignee/Corporate Source  
Idemitsu Kosan Co., Ltd., Japan  
Source

PCT Int. Appl., 63 pp. CODEN: PIXXD2

Document Type  
Patent

Language  
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005081587	A1	20050901	WO 2005-JP2442	20050217
EP 1718124	A1	20061102	EP 2005-719244	20050217
CN 1879454	A	20061213	CN 2005-80001270	20050217
US 20070063638	A1	20070322	US 2006-573661	20060328
KR 2006115372	A	20061108	KR 2006-7008168	20060427

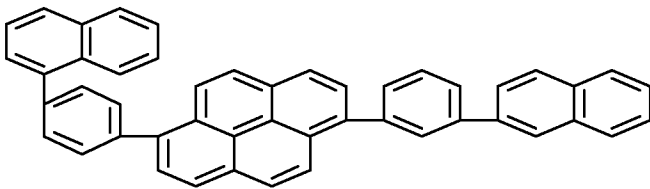
Abstract

The invention refers to a white organic electroluminescence device comprising a neg. electrode and a pos. electrode and, interposed there between, one or more organic thin film layers including at least a light emitting layer, wherein the light emitting layer is constituted of a laminate of blue color light emitting layer and yellow-to-red color light emitting layer and contains an asym. condensed-ring-containing compound. This white color organic electroluminescence device realizes reduced chromaticity changes and excels in luminous efficiency and thermal stability, ensuring strikingly prolonged service life.

Hit Structure

CAS Registry Number  
863292-28-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1-[3-(2-naphthalenyl)phenyl]-6-[4-(1-naphthalenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)

L5 ANSWER 36 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:656260 CAPLUS [Full-text](#)

Document Number

143:275223

Title

Tetra-substituted pyrenes: new class of blue emitter for organic **light-emitting** diodes

Author/Inventor

Sotoyama, Wataru; Sato, Hiroyuki; Kinoshita, Masaru; Takahashi, Toshiro; Matsuura, Azuma; Kodama, Jun; Sawatari, Norio; Inoue, Hiroshi

Patent Assignee/Corporate Source

Functional Organic Materials Laboratory, Fujitsu Laboratories Limited, Morinosato-Wakamiya, Atsugi, 243-0197, Japan

Source

Digest of Technical Papers - Society for Information Display International Symposium (2003), 34, 1294-1297 CODEN: DTPSDS

Document Type

Journal; (computer optical disk)

Language

English

Abstract

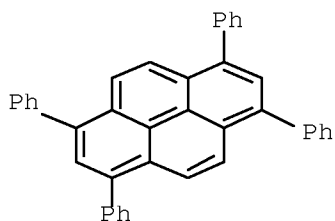
We have developed a new class of highly-fluorescent blue emitter for organic **light-emitting** diodes (OLEDs) consisting of tetra-substituted pyrenes. From the anal. of the excited state diagrams of pyrene and its derivs. by MO calcs., we found that the new tetra-substituted pyrenes are highly fluorescent. OLEDs fabricated using the synthesized tetra-substituted pyrenes as emitters showed high efficiency and good color purity.

Hit Structure

CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name

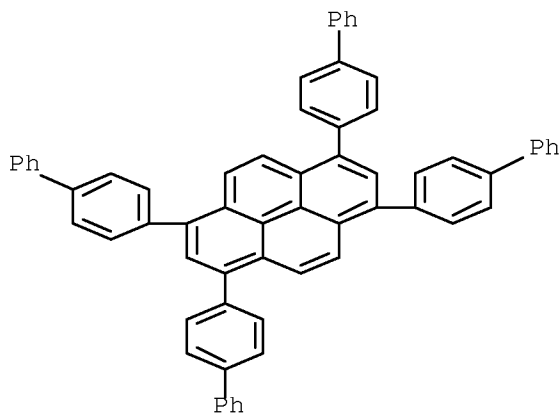
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



CAS Registry Number  
790273-07-3 CAPLUS

Chemical or Trade Name

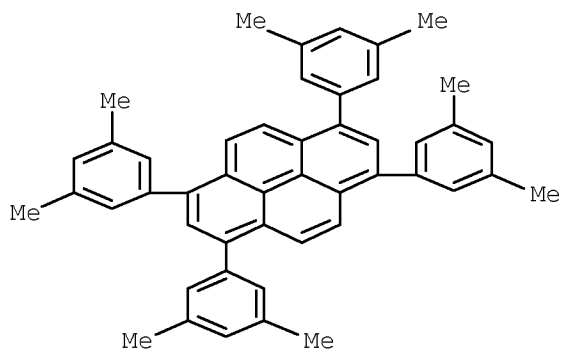
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



CAS Registry Number

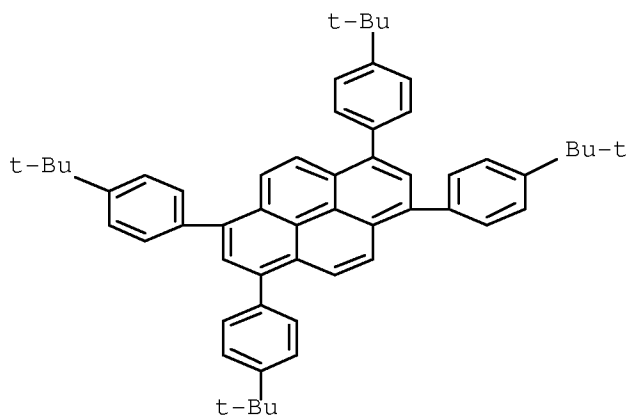
863639-30-9 CAPLUS

Chemical or Trade Name  
Fyrene, 1,3,6,8-tetrakis(3,5-dimethylphenyl)- (CA INDEX NAME)



CAS Registry Number  
863639-31-0 CAPLUS

Chemical or Trade Name  
Fyrene, 1,3,6,8-tetrakis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)

Accession Number

2005:336613 CAPLUS [Full-text](#)

Document Number

144:13629

Title

High-performance blue OLEDs based on a sterically hindered pyrene host material

Author/Inventor

Yeh, Chia-Chun; Lee, Meng-Ting; Chen, Hsian-Hung; Chen, Chin H.

Patent Assignee/Corporate Source

Department of Applied Chemistry, National Chiao Tung University, Hsinshu, Taiwan, 300, Taiwan

Source

Digest of Technical Papers - Society for Information Display International Symposium (2004), 35, 788-791 CODEN: DTPSDS

Document Type

Journal; (computer optical disk)

Language

English

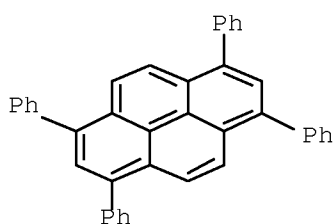
Abstract

The authors developed a blue organic **light-emitting device (OLED)** emitter based on a sterically hindered fluorescent host material of tetra(o-tolyl)pyrene (TOTP) which effectively suppresses the excimer emission of its **electroluminescence**. Doped with DSA-Ph of matching LUMO/HOMO, TOTP was used to produce a blue device with luminance efficiency of 8.64 cd/A at 20 mA/cm<sup>2</sup> and 7.1 V with a CIE<sub>x,y</sub> color coordinate of [0.15, 0.28]. The properties of selected 1,3,6,8-tetra(aryl)pyrenes were measured and compared with conventional anthracene-based materials.

Hit Structure

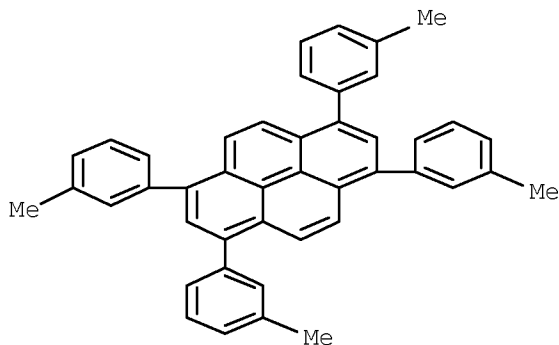
CAS Registry Number  
13636-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



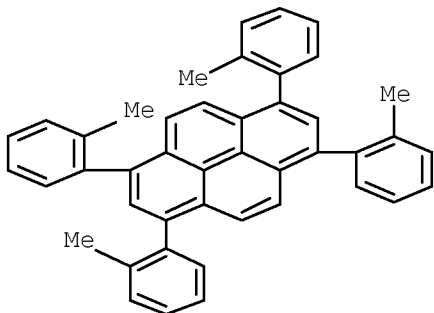
CAS Registry Number  
870133-71-4 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(3-methylphenyl)- (CA INDEX NAME)



CAS Registry Number  
870133-72-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(2-methylphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

.L5 ANSWER 38 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number 2005:325561 CAPLUS [Full-text](#)

Document Number 142:381949

Title Pyrene derivative, **light emitting** element, and **light emitting** device

Author/Inventor Nomura, Ryoji; Takasu, Takako; Abe, Hiroko; Tokuda, Atsushi

Patent Assignee/Corporate Source Semiconductor Energy Laboratory Co., Ltd., Japan

Source U.S. Pat. Appl. Publ., 22 pp. CODEN: USXXCO

Document Type Patent

Language English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050079385	A1	20050414	US 2004-954341	20041001
US 7232619	B2	20070619		
JP 2005126431	A	20050519	JP 2004-289684	20041001

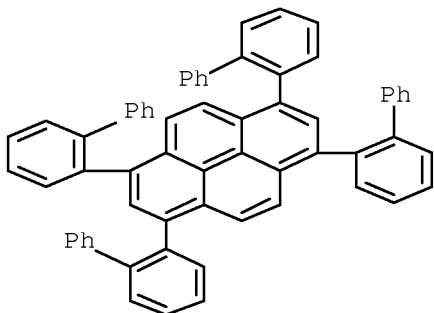
Abstract

It is an object of the present invention to provide a pyrene derivative that is unlikely to crystallize and is superior in quality in the case of forming a film. It is an object of the present invention to provide a **light-emitting** element from which stable **light emission** can be obtained for a long stretch of time by using the pyrene derivative [R1-4 = C1-6 alkyl, alkoxy, aryl, diarylamino or silyl with one or more alkyl or aryl groups]. By using vacuum deposition to deposit this material, a **light-emitting** element from which stable **light emission** can be obtained efficiently for a long stretch of time can be obtained.

Hit Structure

CAS Registry Number 723285-24-3 CAPLUS

Chemical or Trade Name Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-2-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

.L5 ANSWER 39 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number 2005:292353 CAPLUS [Full-text](#)

Document Number 143:16108

Title White organic **light-emitting** diode comprising of blue fluorescence and red phosphorescence

Author/Inventor Qin, Dashan; Tao, Ye

Patent Assignee/Corporate Source National Research Council of Canada, Institute for Microstructural Sciences, Ottawa, ON, K1A 0R6, Can.

Source

Applied Physics Letters (2005), 86(11), 113507/1-113507/3 CODEN: APPLAB; ISSN: 0003-6951  
Document Type  
Journal  
Language  
English

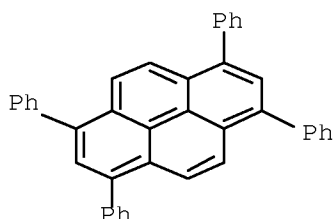
Abstract

A white organic **light-emitting** diode with the structure of ITO/NPB 30 nm/TCTA+2% TPP 20 nm/BCP+0.4% Ir(piq)3/20 nm/Alq3 40 nm/Mg:Ag was fabricated and characterized, where 2,5,7,10-tetra-phenylpyrene and tris(1-phenylisoquinoline) Ir (III) [Ir(piq)3] were used as a blue fluorescent dye and a red phosphorescent dye resp. The I-V characteristics of the device showed a turn-on voltage of 2.6 V. The **electroluminescent** spectra of the device consisted of blue fluorescent and red phosphorescent emissions. The intensity of the blue emission increased gradually relative to the red emission with increasing voltage. The emissions of the device were in the white-light region between 10 and 15 V. A maximum white light luminance of 1076 cd/m<sup>2</sup> with CIE coordinates of (x, y = 0.27, 0.24) was reached at 15 V with an efficiency of 1.35 cd/A. The white **light emission** is related to the simultaneous exciton formation on both sides of the TCTA/BCP interface.

Hit Structure

CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



\_L5 ANSWER 41 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:131766 CAPLUS [Full-text](#)

Document Number

142:400200

Title

Increased electrophosphorescent efficiency in organic **light emitting diodes** by using an exciton-collecting structure

Author/Inventor

Qin, Dashan; Tao, Ye

Patent Assignee/Corporate Source

National Research Council of Canada, Institute for Microstructural Sciences, Ottawa, ON, K1A 0R6, Can.

Source

Journal of Applied Physics (2005), 97(4), 044505/1-044505/4 CODEN: JAPIAU; ISSN: 0021-8979

Document Type

Journal

Language

English

Abstract

A phosphorescent dye, tris(1-phenylisoquinoline) Ir (III) [Ir(piq)3] doped interface of 4,4',4"-tris(carbazol-9-yl)-triphenylamine (TCTA) and 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline (BCP) was studied in organic **light emitting diodes**. Two devices with different emissive interfaces, TCTA+6% Ir(piq)3/BCP and TCTA+6% Ir(piq)3/BCP+1% Ir(piq)3, exhibited nearly the same red Ir(piq)3 emissions and I-V characteristics. However, the 2nd device showed higher efficiency and luminance than the 1st device over the whole voltage range. The maximum efficiency of 6.0 cd/A reached at 0.026 mA/cm2 in the 2nd device was 30% higher than that of 4.6 cd/A reached at 0.032 mA/cm2 in the 1st device. The improved performance of the 2nd device is attributed to the fact that the excitons can be formed on both sides of the TCTA/BCP interface and can be more efficiently collected with the addnl. 1% Ir(piq)3 doped in the BCP layer. Therefore, the exciton-collecting structure, doping phosphorescent dyes into both sides of the TCTA/BCP interface, is believed to be a very useful way to optimize the performance of phosphorescent organic **light emitting diodes**.

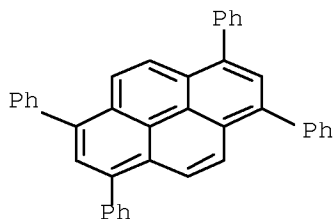
Hit Structure

CAS Registry Number

13638-82-9 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



\_L5 ANSWER 42 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2005:75901 CAPLUS [Full-text](#)

Document Number

142:186928

Title

Organic **electroluminescent** (EL) devices with improved electron-injection efficiency and full-color flat displays using them

Author/Inventor

Nakayama, Masaya; Kinoshita, Shoji; Kodama, Atsushi

Patent Assignee/Corporate Source

Fujitsu Ltd., Japan

Source

Jpn. Kokai Tokkyo Koho, 20 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005026210	A	20050127	JP 2004-85516	20040323

Abstract

The devices have hole-transporting layers, **light-emitting** layers, and electron-transporting layers in this order between anodes and cathodes, satisfying that  $[E_a(\text{eml}) - E_a(\text{htl})] \geq 0.15 \text{ eV}$  and  $[E_a(\text{etl}) - E_a(\text{eml})] \leq 0.15 \text{ eV}$ .  $E_a(\text{eml})$  [ $E_a(\text{htl})$ ,  $E_a(\text{etl})$ ] = electron affinity of **light-emitting** layer, hole-transporting layer, and electron-transporting layer, resp.]. The displays, using the devices as blue-emitting sources, show improved brightness.

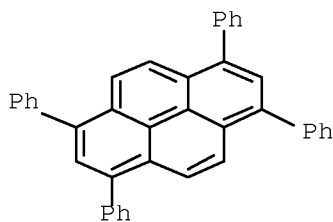
Hit Structure

CAS Registry Number

13638-82-9 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

\_L5 ANSWER 43 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN



Accession Number  
2004:1035604 CAPLUS [Full-text](#)  
Document Number  
142:29757

Title  
Dibenzospiro compounds, their organic solutions for manufacture of luminescent films, and blue-emitting organic **electroluminescent** devices using them  
Author/Inventor  
Inoue, Tetsuya; Ikeda, Shuji; Hosokawa, Chishio  
Patent Assignee/Corporate Source  
Idemitsu Kosan Co., Ltd., Japan  
Source  
Jpn. Kokai Tokkyo Koho, 49 pp. CODEN: JKXXAF  
Document Type  
Patent  
Language  
Japanese  
Patent Information

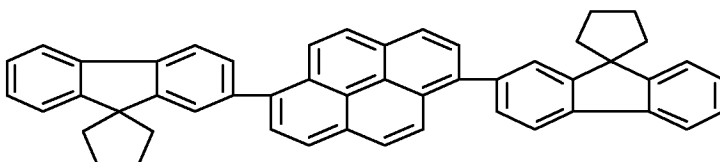
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004339136	A	20041202	JP 2003-136838	20030515
WO 2004110968	A1	20041223	WO 2004-JP6331	20040430
EP 1623968	A1	20060208	EP 2004-730688	20040430
CN 1791567	A	20060621	CN 2004-80013354	20040430
US 20070042220	A1	20070222	US 2005-556530	20051114

Abstract  
The compds. are (Sp)nX<sub>Ym</sub> [Sp = dibenzospiro groups I; L = single bond, (CR'R'')<sub>e</sub>, (SiR'R'')<sub>e</sub>, O, CO, NR'; R', R'' = H, 6-50-membered aromatic group, 5-50-membered aromatic heterocyclylene, C1-50 alkyl; Z = C, Si, Ge; Q = groups necessary for forming cyclic structure; R = 6-50-membered aromatic group, 5-50-membered aromatic heterocyclyl, C1-50 alkyl, etc.; X = 6-50-membered aromatic group, 12-20-membered condensed aromatic group, 5-50-membered aromatic heterocyclylene other than (poly)anthracenediyl; Y = (vinyl linkage-containing) 6-50-membered aromatic group; a, b = 0-4; e = 1-10; m = 0-2; n = 1-4]. The compds. show good heat resistance and organic solvent solubility. Thus, di(spiroindanefluorenyl)benzene II was manufactured and used for a blue-emitting organic **electroluminescent** device.

#### Hit Structure

CAS Registry Number  
799560-33-1 CAPLUS

Chemical or Trade Name  
Spiro[cyclopentane-1,9'-(9H)fluorene], 2',2'''-(1,6-pyrenediyl)bis- (CA  
INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

L5 ANSWER 44 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2004:1035145 CAPLUS [Full-text](#)  
Document Number  
142:13489

Title  
White-emitting organic **electroluminescent** devices employing a **light-emitting** materials containing substituted pyrene structural units  
Author/Inventor  
Sakamoto, Yukinari; Ichimura, Mari; Kashiwabara, Mitsuhiro; Tamura, Shinichiro  
Patent Assignee/Corporate Source  
Sony Corporation, Japan  
Source  
Eur. Pat. Appl., 20 pp. CODEN: EPXXDW  
Document Type  
Patent  
Language  
English  
Patent Information

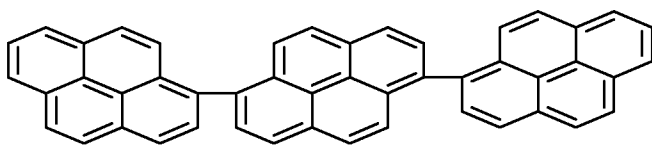
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1482573	A2	20041201	EP 2004-12472	20040526
EP 1482573	A3	20070725		
TW 281362	B	20070511	TW 2004-115125	20040527
KR 2004103439	A	20041208	KR 2004-38477	20040528
JP 2005011806	A	20050113	JP 2004-159060	20040528
JP 4529547	B2	20100825		
US 20070152566	A1	20070705	US 2004-856043	20040528
US 7244516	B2	20070717		
CN 1575067	A	20050202	CN 2004-10076617	20040531
CN 100533811	C	20090826		

Abstract  
Organic **electroluminescent** devices are described which comprise an organic layer having a **light-emission** region and being disposed between an anode and a cathode; where the organic layer contains, as an organic **light-emitting** material, a compound represented by formula (I) where each of R<sub>1</sub>-26 represents a substituent selected from the group consisting of a hydrogen atom, a halogen atom, a hydroxy group, a mercapto group, a nitro group, an amino group, a cyano group, an alkyl group, an alkenyl group, a cycloalkyl group, an alkoxy group, an alkylthio group, a silyl group, an alkyl silyl group, a siloxanyl group, an aralkyl group, an aromatic hydrocarbon group, an aromatic heterocyclic group, an ester group, an aryloxy group, a formyl group, an alkoxy carbonyl group, and a carboxyl group, and n is a numeric value from 1 to 3.

#### Hit Structure

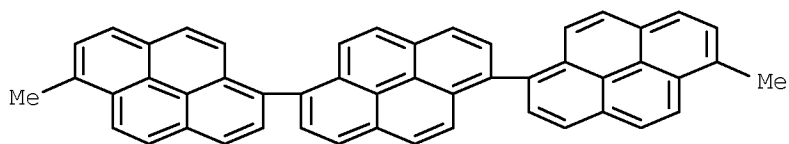
CAS Registry Number  
797057-73-9 CAPLUS

Chemical or Trade Name  
1,1':6',1''-Terpyrene (9CI) (CA INDEX NAME)



CAS Registry Number  
797057-74-0 CAPLUS

Chemical or Trade Name  
1,1':6',1''-Terpyrene, 6,6''-dimethyl- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD  
(2 CITINGS)

Accession Number

2004:965354 CAPLUS [Full-text](#)

Document Number

141:403312

Title

1,3,6,8-Tetrasubstituted pyrene compounds, organic **electroluminescent** device and organic **electroluminescent** display

Author/Inventor

Sotoyama, Wataru; Sato, Hiroyuki; Matsuura, Azuma; Kinoshita, Masaru; Takahashi, Toshiro

Patent Assignee/Corporate Source

Fujitsu Limited, Japan

Source

PCT Int. Appl., 67 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096945	A1	20041111	WO 2003-JP5577	20030501
EP 1621597	A1	20060201	EP 2003-721011	20030501
US 20050238920	A1	20051027	US 2005-166692	20050627

Abstract

The invention refers to an organic **electroluminescent** device containing, as a luminescent material, a 1,3,6,8-tetrasubstituted pyrene compound wherein the substituents are Ph rings with at least one substituted aryl as a substituent.

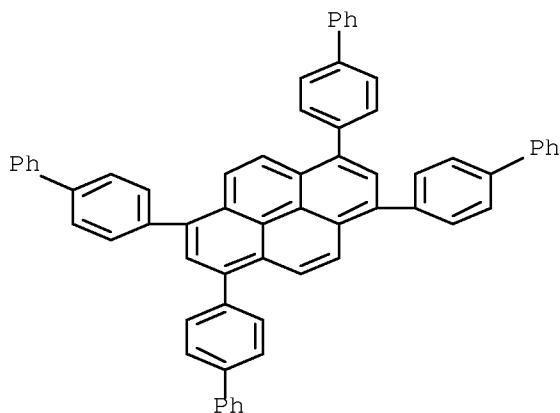
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CAS Registry Number

790273-07-3 CAPLUS

Chemical or Trade Name

Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)

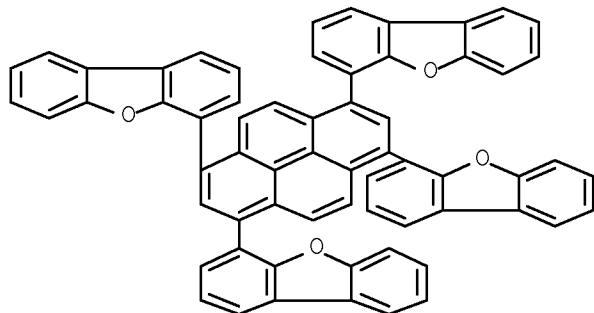


CAS Registry Number

790273-08-4 CAPLUS

Chemical or Trade Name

Dibenzofuran, 4,4',4'',4'''-(1,3,6,8-pyrenetetrayl)tetrakis- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 9

THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD  
(18 CITINGS)

Accession Number  
2004:965188 CAPLUS [Full-text](#)

Document Number  
141:403311

Title  
1,3,6,8-Tetrasubstituted pyrene compounds, organic electroluminescent device and organic electroluminescent display

Author/Inventor  
Sotoyama, Wataru

Patent Assignee/Corporate Source  
Fujitsu Limited, Japan

Source  
PCT Int. Appl., 45 pp. CODEN: PIXXD2

Document Type  
Patent

Language  
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096743	A1	20041111	WO 2003-JP5417	20030428
EP 1619177	A1	20060125	EP 2003-728002	20030428
EP 1619177	B1	20080227		
JP 4192152	B2	20081203	JP 2004-571293	20030428
US 20050156164	A1	20050721	US 2005-74899	20050309
US 7571894	B2	20090811		

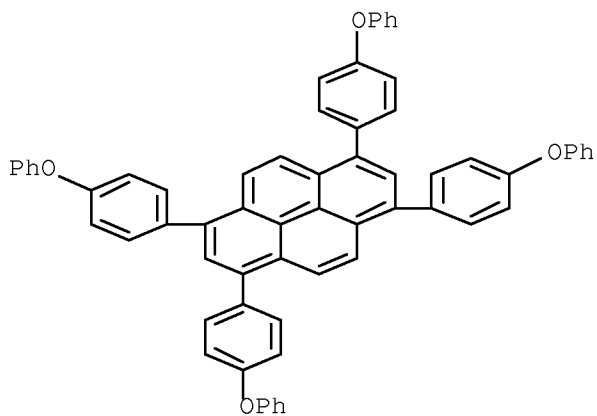
Abstract

The invention refers to an organic electroluminescent device containing, as a luminescent material, a 1,3,6,8-tetrasubstituted pyrene compound wherein the substituents are Ph rings containing at least one of the following as a substituent: -NR<sub>6</sub>R<sub>7</sub>, -SiR<sub>8</sub>R<sub>9</sub>R<sub>10</sub>, -SR<sub>11</sub>, or -OR<sub>12</sub> [R<sub>6</sub>-R<sub>12</sub> = H or substituent].

Hit Structure

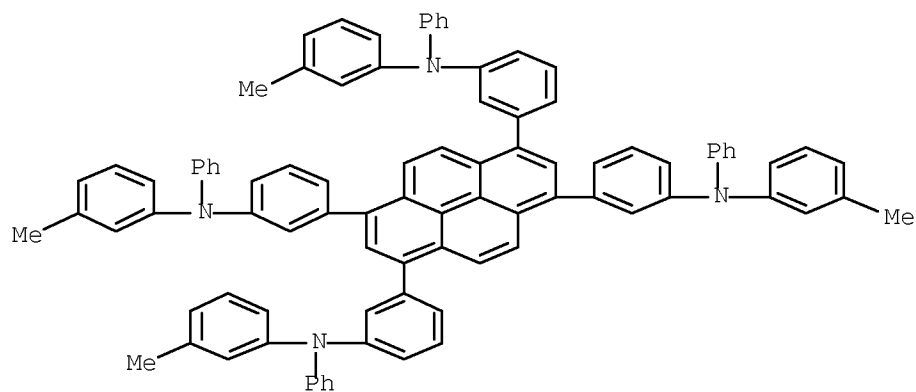
CAS Registry Number  
790721-24-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(4-phenoxyphenyl)- (CA INDEX NAME)



CAS Registry Number  
790721-25-4 CAPLUS

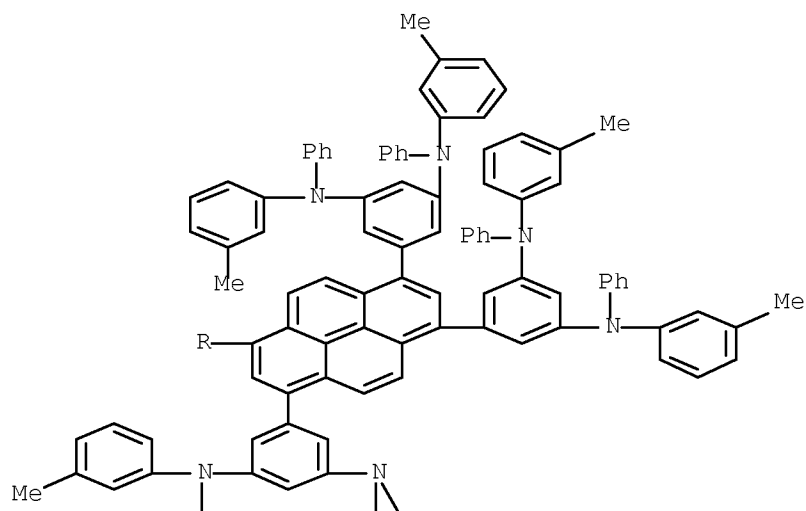
Chemical or Trade Name  
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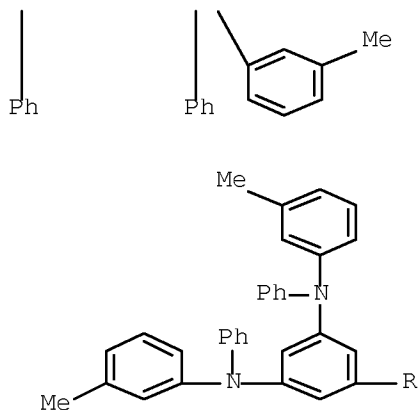


CAS Registry Number  
790721-26-5 CAPLUS

Chemical or Trade Name  
1,3-Benzenediamine, 5,5',5'',5'''-(1,3,6,8-pyrenetetrayl)tetrakis[N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)

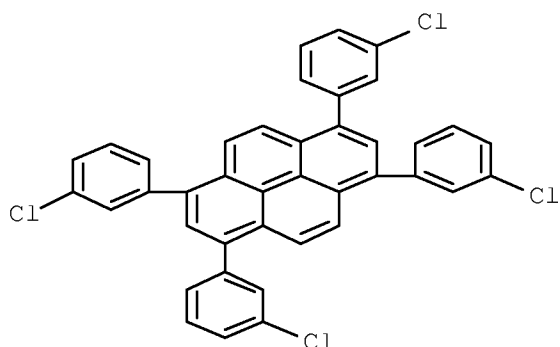
PAGE 1-A





CAS Registry Number  
790721-27-6 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(3-chlorophenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(9 CITINGS)

L5 ANSWER 47 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2004:799549 CAPLUS [Full-text](#)

Document Number  
141:304000

Title  
Process for preparation of 1,6-bis(diphenylamino)pyrene derivatives as electroluminescent devices

Author/Inventor  
Funahashi, Masakazu  
Patent Assignee/Corporate Source  
Idemitsu Kosan Co. Ltd., Japan

Source  
PCT Int. Appl., 51 pp. CODEN: PIXXD2

Document Type  
Patent

Language  
Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004083162	A1	20040930	WO 2004-JP2945	20040308
EP 1604974	A1	20051214	EP 2004-718430	20040308
CN 1784376	A	20060607	CN 2004-80012602	20040308
CN 101343234	A	20090114	CN 2008-10099080	20040308
JP 4267623	B2	20090527	JP 2005-503649	20040308
IN 2005CN02302	A	20070406	IN 2005-CN2302	20050919
IN 229393	A1	20090320		
US 20070009758	A1	20070111	US 2005-549801	20051121

IN 2008CN01626	A	20090109	IN 2008-CN1626	20080401
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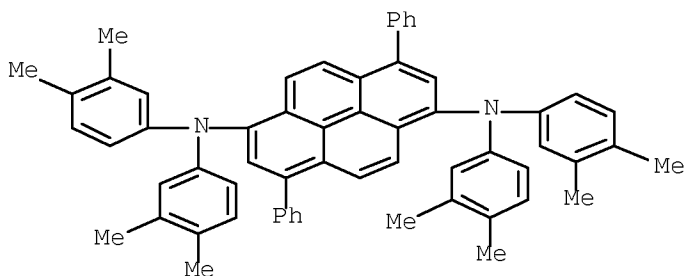
# Abstract

This invention pertains to a method for producing (diphenylamino)pyrene derivs. I [wherein R = H, (un)substituted alkyl, aryl, aralkyl, etc.; R' = (un)substituted diphenylamino; q = 1-9; p = 1-9; with limitation of p + q < 10], which are useful as **electroluminescent** devices. For example, 1,6-dibromopyrene was reacted with 4-isopropylidiphenylamine in toluene in the presence of Pd(OAc)<sub>2</sub>, t-Bu<sub>3</sub>P, and t-BuONa to give 1,6-bis(4-isopropylidiphenylamino)pyrene. I were tested as organic **electroluminescent** devices which have a long life and emit a blue color at a high luminescence efficiency.

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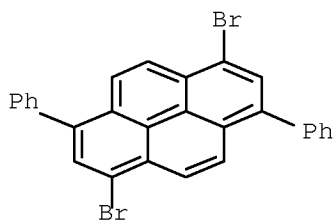
CAS Registry Number  
764657-27-4 CAPLUS

Chemical or Trade Name  
1,6-Pyrenediamine, N1,N1,N6,N6-tetrakis(3,4-dimethylphenyl)-3,8-diphenyl-  
(CA INDEX NAME)



CAS Registry Number  
764657-28-5 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-dibromo-3,8-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

.L5 ANSWER 48 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2004:756795 CAPLUS [Full text](#)

Document Number

141:285537

Title

Organic **electroluminescent** device employing a derivative of 9,10-diaminoanthracene as a green luminescent dopant

Author/Inventor

Seo, Jeong Dae; Kim, Hee Jung; Lee, Kyung Hoon; Oh, Hyoung Yun; Kim, Myung Seop; Park, Chun Gun

Patent Assignee/Corporate Source

LG Electronics Inc., S. Korea

Source

PCT Int. Appl., 35 pp. CODEN: PIXXD2

Document Type

Patent

Language

English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004078872	A2	20040916	WO 2004-KR472	20040305
WO 2004078872	A3	20041216		
KR 2004079803	A	20040916	KR 2003-20468	20030401
US 20040209118	A1	20041021	US 2004-792130	20040304
US 7651788	B2	20100126		
EP 1603990	A2	20051214	EP 2004-717900	20040305
CN 1771313	A	20060510	CN 2004-80009251	20040305
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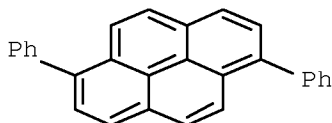
Abstract

Organic **electroluminescent** devices (OLEDs) are described which comprise a substrate; a first and second electrodes formed on the substrate; and a **light-emitting** layer formed between the first electrode and the second electrode, with the **light-emitting** layer having a plurality of materials and being a green luminescent material using a dopant with chemical formula I where at least one of A1 and A2 is selected from a substituted or non-substituted aromatic group, a heterocyclic group, an aliphatic group and hydrogen. The materials forming the **light-emitting** layer together with the material of chemical formula (I) may have the formula B1-X-B2 where X is selected from naphthalene, fluorine, anthracene, phenanthrene, pyrene, perylene, quinoline, and isoquinoline; and at least one of B1 and B2 is selected from aryl, alkylaryl, alkoxyaryl, arylaminoaryl, alkylamino, and arylallyl.

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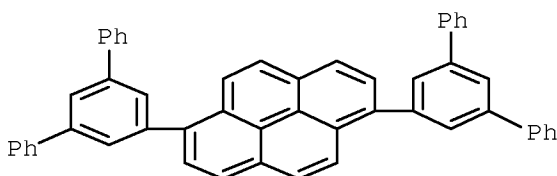
CAS Registry Number  
55009-75-1 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-diphenyl- (CA INDEX NAME)



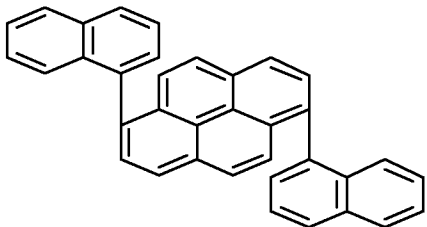
CAS Registry Number  
722498-68-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1':3',1''-terphenyl]-5'-yl)- (9CI) (CA INDEX NAME)



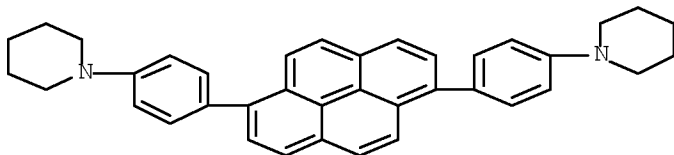
CAS Registry Number  
722498-69-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-1-naphthalenyl- (CA INDEX NAME)



CAS Registry Number  
722498-70-6 CAPLUS

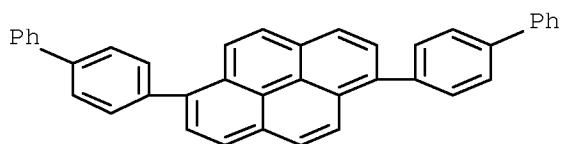
Chemical or Trade Name  
Piperidine, 1,1'-(1,6-pyrenediyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



CAS Registry Number  
722498-71-7 CAPLUS

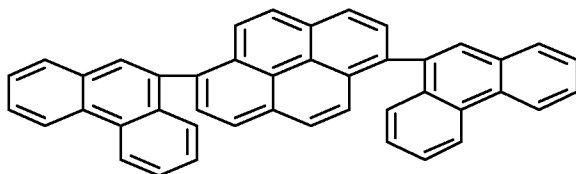
Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)





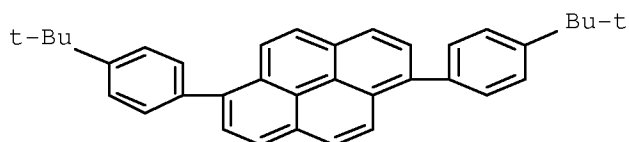
CAS Registry Number  
722498-72-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-9-phenanthrenyl- (CA INDEX NAME)



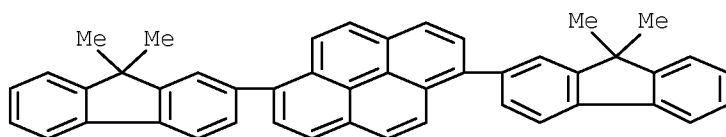
CAS Registry Number  
722498-73-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



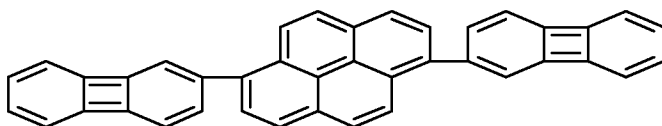
CAS Registry Number  
722498-74-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis(9,9-dimethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



CAS Registry Number  
722498-75-1 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-biphenylenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

Accession Number  
2004:569984 CAPLUS [Full-text](#)  
Document Number  
141:131054

Title  
Organic **electroluminescent** elements and spirobifluorene derivatives useful in them  
Author/Inventor  
Vestweber, Horst; Gerhard, Anja; Stoessel, Philipp; Spreitzer, Hubert  
Patent Assignee/Corporate Source  
Covion Organic Semiconductors GmbH, Germany

Source  
PCT Int. Appl., 30 pp. CODEN: PIXXD2

Document Type  
Patent

Language  
German

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004058911	A2	20040715	WO 2003-EP13927	20031209
WO 2004058911	A3	20051208		
EP 1578885	A2	20050928	EP 2003-782338	20031209
CN 1756824	A	20060405	CN 2003-80107453	20031209
CN 100489056	C	20090520		
JP 2006511939	T	20060406	JP 2004-562714	20031209
KR 1030158	B1	20110418	KR 2005-7009842	20031209
US 20060063027	A1	20060323	US 2005-540461	20050721

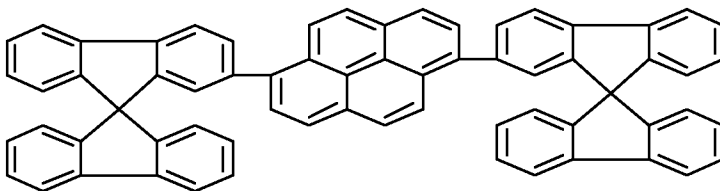
#### Abstract

Organic **electroluminescent** devices are described in which the emitting layer consists of a mixture of  $\geq 1$  hole-transporting material and  $\geq 1$  emitting material in a weight ratio (hole-transporting material:emitting material) of 1:99 to 99:1 and that  $\geq 1$  of the substances contains  $\geq 1$  spiro-9,9'-bifluorene unit. Spiro-9,9'-bifluorene derivs. suitable for use in **electroluminescent** devices are also described.

#### Hit Structure

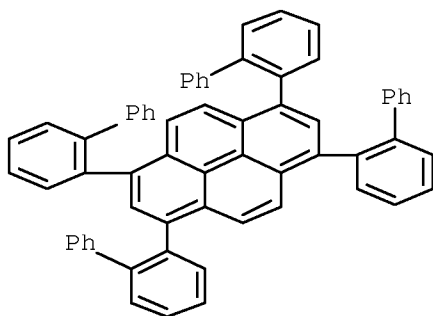
CAS Registry Number  
723285-22-1 CAPLUS

Chemical or Trade Name  
9,9'-Spirobi[9H-fluorene], 2,2'-(1,6-pyrenediyl)bis- (CA INDEX NAME)



CAS Registry Number  
723285-24-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis([1,1'-biphenyl]-2-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD  
(12 CITINGS)

Accession Number  
2004:568210 CAPLUS [Full-text](#)  
Document Number  
141:131023

Title  
Organic **electroluminescent** devices employing blue-emitting dopants based on amine derivatives of pyrene  
Author/Inventor

Seo, Jeong Dae; Lee, Kyung Hoon; Kim, Hee Jung; Park, Chun Gun; Oh, Hyoung Yun  
Patent Assignee/Corporate Source  
Lg Electronics Inc., S. Korea

Source  
Eur. Pat. Appl., 43 pp. CODEN: EPXXDW

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1437395	A2	20040714	EP 2003-29661	20031223
EP 1437395	A3	20050831		
KR 2004057862	A	20040702	KR 2003-20465	20030401
US 20040137270	A1	20040715	US 2003-743778	20031224
US 7700201	B2	20100420		
JP 2004204238	A	20040722	JP 2003-428297	20031224
JP 3926791	B2	20070606		
CN 1535089	A	20041006	CN 2003-10124405	20031224
CN 100481574	C	20090422		
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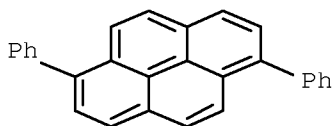
#### Abstract

Organic **electroluminescent** devices are described which comprise a substrate; a first and second electrodes formed on the substrate; an emitting layer formed between the first electrode and the second electrode, the emitting layer having a plurality of materials one of which being a blue-emitting dopant with general formula (I), where at least one of A1 and A2 is selected from a substituted or non-substituted aromatic group, a heterocyclic group, an aliphatic group and hydrogen. The materials forming the emitting layer together with the material of I may have a chemical formula B1-X-B2 where X is selected from a group consisting of naphthalene, anthracene, phenanthrene, pyrene, perylene, and quinoline and at least 1 of the B1 and B2 is selected from a group consisting of aryl, alkylaryl, alkoxyaryl, arylaminoaryl and alkylaminoaryl.

#### Hit Structure

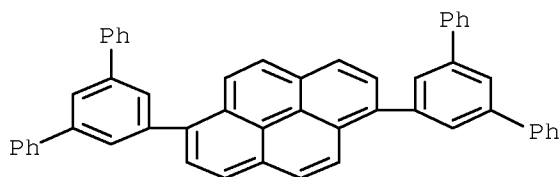
CAS Registry Number  
55009-75-1 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-diphenyl- (CA INDEX NAME)



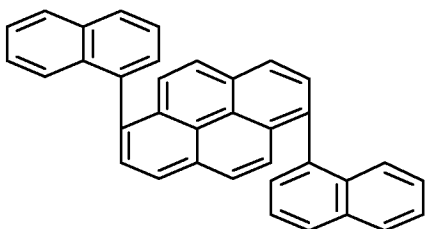
CAS Registry Number  
722498-68-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1':3',1''-terphenyl]-5'-yl)- (9CI) (CA INDEX NAME)



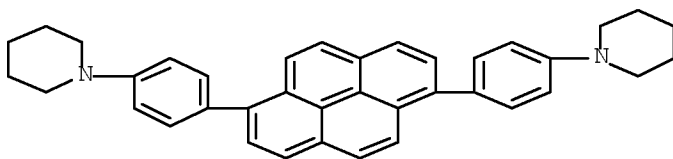
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722498-69-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-1-naphthalenyl- (CA INDEX NAME)



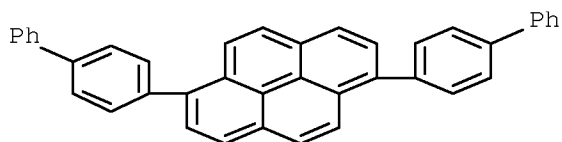
CAS Registry Number  
722498-70-6 CAPLUS

Chemical or Trade Name  
Piperidine, 1,1'-(1,6-pyrenediyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



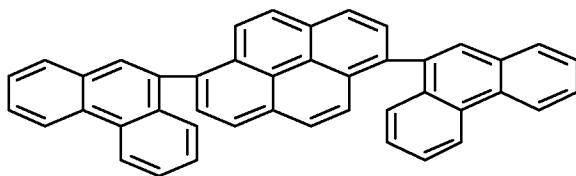
CAS Registry Number  
722498-71-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis([1,1'-biphenyl]-4-yl)- (CA INDEX NAME)



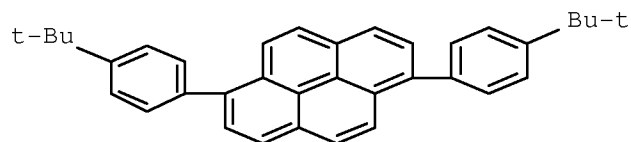
CAS Registry Number  
722498-72-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-9-phenanthrenyl- (CA INDEX NAME)



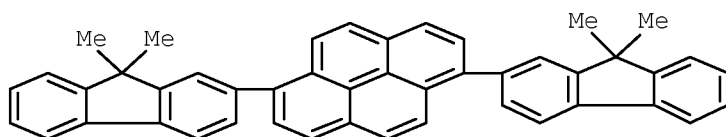
CAS Registry Number  
722498-73-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)



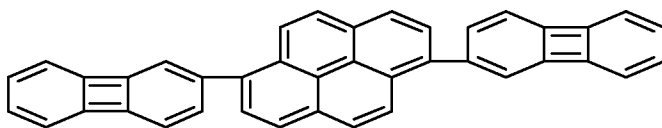
CAS Registry Number  
722498-74-0 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-bis(9,9-dimethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



CAS Registry Number  
722498-75-1 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-biphenylenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS  
RECORD (30 CITINGS)

L5 ANSWER 51 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2004:162657 CAPLUS [Full-text](#)

Document Number

140:225502

Title

Oligoarylene derivatives for organic **electroluminescent** devices

Author/Inventor

Ikedo, Hidetsugu; Matsuura, Masahide; Kawamura, Hisayuki

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

PCT Int. Appl., 35 pp. CODEN: PIXXD2

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004016575	A1	20040226	WO 2003-JP10071	20030807
JP 2004075567	A	20040311	JP 2002-234833	20020812
EP 1533290	A1	20050525	EP 2003-788055	20030807
CN 1675149	A	20050928	CN 2003-819058	20030807
TW 287408	B	20070921	TW 2003-122023	20030811
US 20060134456	A1	20060622	US 2005-522546	20050127
US 7429425	B2	20080930		
US 20090009073	A1	20090108	US 2008-208237	20080910
US 20090009074	A1	20090108	US 2008-208253	20080910

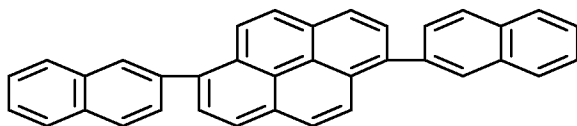
Abstract

The invention relates to oligoarylene derivs. represented by Ar1-Ch-Ar2, Ch1-L-Ch2, Ar3-(L1)a-Ch3-(L2)b-Ar4, and Ar5-Ch4-(Ar7)n-L3-(Ar8)m-Ch5-Ar6(1) [Ch, Ch1 and Ch2 = C14-20 condensed aromatic ring; Ch3, Ch4 and Ch5 = C14-20 arylene group; Ar1-6 = aryl group containing 5-30 atoms; Ar7 and Ar8 = arylene group containing 5-30 atoms; L1-3 = connecting group; and a, b, n and m = 0 or 1]. The oligoarylene derivs. are suited for use as a host material of a blue **electroluminescent** material in an organic **electroluminescent** device.

Hit Structure

CAS Registry Number  
663954-28-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1,6-di-2-naphthalenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS  
RECORD (48 CITINGS)

L5 ANSWER 52 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2004:37438 CAPLUS [Full-text](#)

Document Number

140:102135

Title

Organic **electroluminescent** devices and displays with pyrene-containing vinyl polymer layers

Author/Inventor

Ebisawa, Akira; Shinkai, Masahiro

Patent Assignee/Corporate Source

TDK Corporation, Japan

Source

Jpn. Kokai Tokkyo Koho, 36 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004014325	A	20040115	JP 2002-166962	20020607
JP 4068896	B2	20080326		

# Abstract

The devices comprise organic layers containing polymers of vinyl monomers I (X1-10 = H, alkyl, alkoxy, aryl, aryloxy, heterocyclic group, amino, cyano, halogen; ≥2 of X1-10 may form rings). Organic EL displays equipped with a panel containing multiple nos. of the devices arranged in 2-dimensional arrays are also claimed. Displays giving clear images with high luminance are obtained.

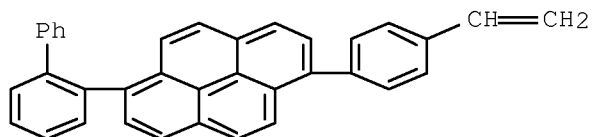
## Hit Structure

CAS Registry Number  
643753-72-4 CAPLUS

Chemical or Trade Name  
Benzenamine, 4-ethenyl-N,N-diphenyl-, polymer with  
1-[1,1'-biphenyl]-2-yl-6-(4-ethenylphenyl)pyrene (9CI) (CA INDEX NAME)

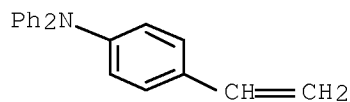
CM  
1

CRN 643753-68-8  
CMF C36 H24



CM  
2

CRN 25069-74-3  
CMF C20 H17 N

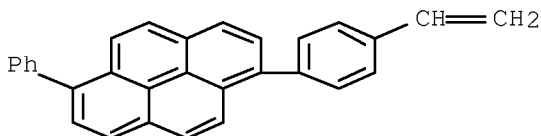


CAS Registry Number  
643753-70-2 CAPLUS

Chemical or Trade Name  
Pyrene, 1-(4-ethenylphenyl)-6-phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM  
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CRN 643753-67-7  
CMF C30 H20

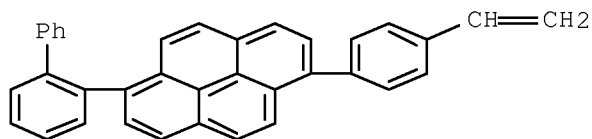


CAS Registry Number  
643753-71-3 CAPLUS

Chemical or Trade Name  
Pyrene, 1-[1,1'-biphenyl]-2-yl-6-(4-ethenylphenyl)-, homopolymer (9CI)  
(CA INDEX NAME)

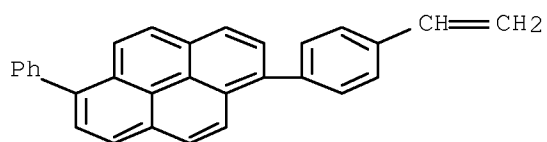
CM  
1

CRN 643753-68-8  
CMF C36 H24



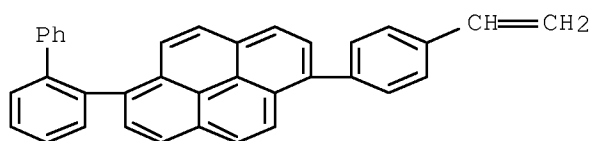
CAS Registry Number  
643753-67-7 CAPLUS

Chemical or Trade Name  
Pyrene, 1-(4-ethenylphenyl)-6-phenyl- (CA INDEX NAME)



CAS Registry Number  
643753-68-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1-[1,1'-biphenyl]-2-yl-6-(4-ethenylphenyl)- (CA INDEX NAME)



\_L5 ANSWER 53 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2003:912665 CAPLUS [Full-text](#)  
Document Number  
139:401353

Title  
**Electroluminescent devices**

Author/Inventor  
Xie, Shuang  
Patent Assignee/Corporate Source  
Can.

Source  
U.S. Pat. Appl. Publ., 32 pp. CODEN: USXXCO

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030215667	A1	20031120	US 2001-985204	20011102

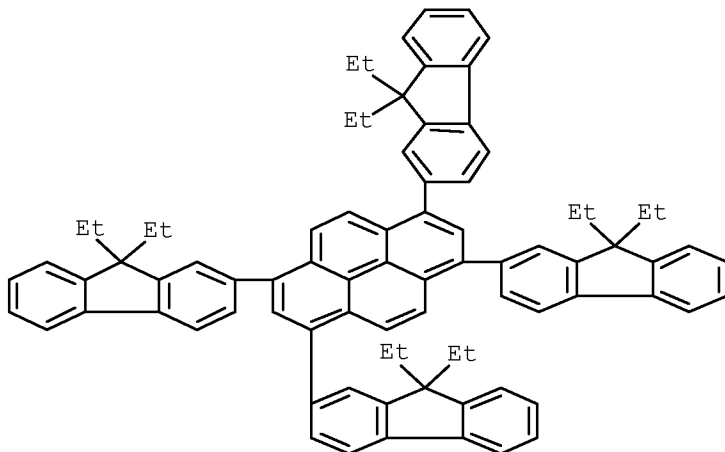
Abstract

Organic **electroluminescent** devices are described which are provided with active layers comprising a host based on  $\geq 1$  anthracene derivative doped with  $\geq 1$  anthracene derivative and/or coumarin derivative and/or an electron injecting/transporting layer comprising a diphenylanthracene derivative with benzazole derivs. attached to the Ph groups. Application to displays is indicated.

Hit Structure

CAS Registry Number  
626236-26-8 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetrakis(9,9-diethyl-9H-fluoren-2-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

\_L5 ANSWER 54 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number  
2003:65268 CAPLUS [Full-text](#)  
Document Number  
139:204830

Title  
Organic **electroluminescent** elements containing organic thin layer comprising 1,3,6,8-tetraphenylpyrene derivative and a carbazole derivative, and organic **electroluminescent** displays employing the elements

Author/Inventor  
Kinoshita, Masaru; Sotoyama, Wataru; Kodama, Jun; Okamoto, Yasuo  
Patent Assignee/Corporate Source  
Fujitsu Limited, Japan; Fuji Photo Film., Ltd.

Source  
U.S. Pat. Appl. Publ., 19 pp. CODEN: USXXCO

Document Type  
Patent

Language  
English

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030157365	A1	20030821	US 2002-278866	20021024
US 7060370	B2	20060613		
JP 2003234190	A	20030822	JP 2002-29335	20020206
JP 3841695	B2	20061101		
TW 316954	B	20091111	TW 2002-124739	20021024
KR 918548	B1	20090921	KR 2002-66343	20021030

Abstract

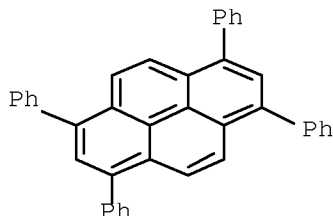
Organic **electroluminescent** elements and organic **electroluminescent** displays employing the elements are described in which the **electroluminescent** elements comprise an organic thin film layer which contains a **light-emitting** layer between a pos. electrode and a neg. electrode, where a layer in the organic thin film layer comprises a 1,3,6,8-tetraphenylpyrene compound expressed by formula I, and a carbazole derivative expressed by formula II, in which R<sub>1</sub> to R<sub>6</sub> may be identical or different, and may be 1 of a H and a substituent group, Ar represents an aromatic group or heterocyclic group, and n represents an integer.

Hit Structure



CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

. L5 ANSWER 55 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2003:279802 CAPLUS [Full-text](#)

Document Number

138:278143

Title

Organic **electroluminescent** devices

Author/Inventor

Suzuki, Koichi

Patent Assignee/Corporate Source

Canon Inc., Japan

Source

Jpn. Kokai Tokkyo Koho, 26 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003109763	A	20030411	JP 2001-300546	20010928

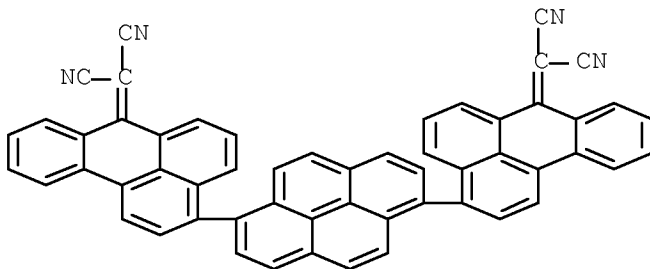
Abstract

The devices comprise a phosphor layer comprising R1-4Ar1, where R1-4 = H, alkyl, (substituted) aralkyl, (substituted) aryl, (substituted) heterocyclic, (substituted) condensed polyarom. ring, (substituted) polyheterocyclic ring; Ar1 = divalency-tetravalency naphthylene, fluorenylene, anthracenylen, phenantrenylene, vinylene, triphenylene, thiophenylene, pyridylene, pyradylene, pyrimidylene, pyradylene, pyrimidylene, pyradadylene.

Hit Structure

CAS Registry Number  
503472-80-8 CAPLUS

Chemical or Trade Name  
Fropanedinitrile, 2,2'-[1,6-pyrenediylbis(7H-benz[de]anthracen-3-yl-7-ylidene)]bis- (9CI) (CA INDEX NAME)



JP 2002329580	A	20021115	JP 2002-36804	20020214
JP 3870102	B2	20070117		
US 20020177009	A1	20021128	US 2002-77800	20020220
US 6830829	B2	20041214		
US 20050049318	A1	20050303	US 2004-940734	20040915
US 6994922	B2	20060207		
JP 2007013199	A	20070118	JP 2006-230669	20060828
JP 4566962	B2	20101020		

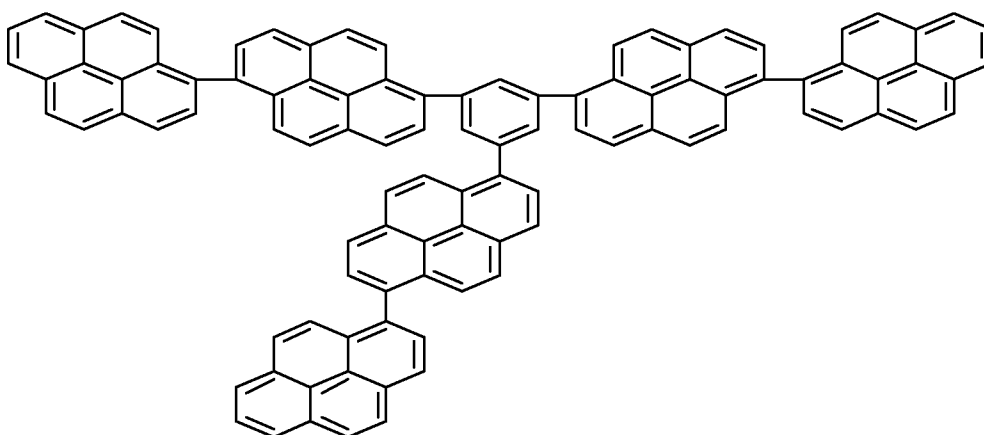
#### Abstract

The **electroluminescent** device has  $\geq 1$  organic layer containing aromatic condensed ring compound a benzene substituted with R1-4 and Ar1-2 (I), a benzene substituted with R5-7 and Ar3-5 (II), or a benzene substituted with R8-9 and Ar6-9 (III) [R1-R9 = H, alkyl, (substituted)alkyl, (substituted)aryl, (substituted)heterocycle, (substituted)amino, cyano; Ar1-Ar9 = (substituted)aromatic condensed ring, (substituted)condensed heterocycle, optionally linked via phenylene], preferably claimed compds. II (R5-R7 = H, Ar3-Ar5 = LH at 1,3,5-positions, L = 9,9-dimethylfluorene-2,7-diyl), II (R5-R7 = H, Ar3-Ar5 = L2H at 1,3,5-positions), III (R8 = R9 = H, Ar6-Ar9 = LH at 1,2,4,5-positions), or III (R8 = R9 = H, Ar6-Ar9 = L2H at 1,2,4,5-positions), as electron-transporting or **light-emitting** layers between a cathode and an anode. The organic layer in the device is useful as an electron-transporting layer, an emitting layer, and a hole/exciton-blocking layer and the device shows high emission, low driving voltage, and improved durability.

#### Hit Structure

CAS Registry Number  
475460-99-2 CAPLUS

Chemical or Trade Name  
1,1'-Bipyrene, 6,6'',6'''-(1,3,5-benzenetriyl)tris- (CA INDEX NAME)



OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

.L5 ANSWER 57 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2002:153115 CAPLUS [Full-text](#)

Document Number

136:207501

Title

Organic **electroluminescent** device

Author/Inventor

Kohama, Toru; Nishiyama, Takuya; Makiyama, Akira

Patent Assignee/Corporate Source

Toray Industries, Inc., Japan

Source

Jpn. Kokai Tokkyo Koho, 8 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002063988	A	20020228	JP 2000-250684	20000822

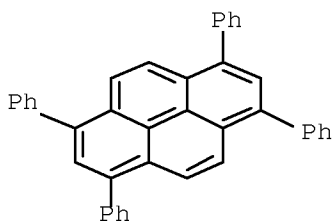
Abstract

The invention relates to an organic **electroluminescent** device, suited for use in making a flat panel display, an illumination device, etc., wherein the pyrene derivative with bulky substitution groups for controlling crystallization and excimer generation, is utilized as a blue-emitting organic phosphore for enhancing the luminescence efficiency and the color purity.

Hit Structure

CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD  
(4 CITINGS)

.L5 ANSWER 58 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2001:299286 CAPLUS [Full-text](#)

Document Number

134:302822

Title

Organic **electroluminescence** devices

Author/Inventor

Toyama, Wataru; Hayano, Tomoaki; Sato, Hiroyuki; Matsuuru, Akira

Patent Assignee/Corporate Source

Fujitsu Ltd., Japan; Fuji Photo Film Co., Ltd.

Source

Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001118682	A	20010427	JP 1999-299876	19991021
JP 3905265	B2	20070418		

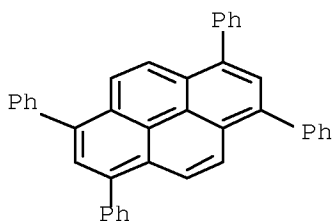
Abstract

A blue-emitting device comprises a phosphor layer containing an alkyl derivative, a cycloalkyl derivative or an aryl derivative of 1,3,6,8-tetraphenylperene.

Hit Structure

CAS Registry Number  
13638-82-9 CAPLUS

Chemical or Trade Name  
Pyrene, 1,3,6,8-tetraphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

.L5 ANSWER 59 OF 59 CAPLUS COPYRIGHT 2011 ACS on STN

Accession Number

2000:694280 CAPLUS ~~File-19-21~~

Document Number

133:259476

Title

Amino or styryl compound, organic thin film, and electroluminescent device

Author/Inventor

Hosokawa, Chishio; Funahashi, Masakazu; Azuma, Hisahiro; Ikeda, Shuji; Arai, Hiromasa

Patent Assignee/Corporate Source

Idemitsu Kosan Co., Ltd., Japan

Source

Jpn. Kokai Tokkyo Koho, 30 pp. CODEN: JKXXAF

Document Type

Patent

Language

Japanese

Patent Information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000273056	A	20001003	JP 1999-352216	19991210
JP 4429438	B2	20100310		
JP 2010006818	A	20100114	JP 2009-188488	20090817

Abstract

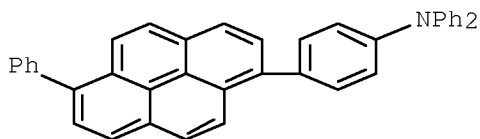
The compound comprises D1Ar1X1(X2)n (I: Ar1 = C6-30 di- or trivalent aromatic group; X1, X2 = styryl, styrylaryl, diarylamino, diarylaminoaryl; n = 0, 1; if X1 or X2 = the styryl group, then D1 = C16-60 aromatic group having ≥ 4 carbon rings; if X1 and X2 = the amino group, then D1 = C20-60 aromatic group having ≥ 5 carbon rings). I shows good heat resistance (glass transition temperature ≥ 90°) and long luminescence lifetime.

Hit Structure

CAS Registry Number  
294881-17-7 CAPLUS

Chemical or Trade Name

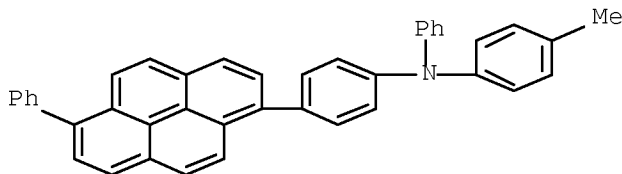
Benzenamine, N,N-diphenyl-4-(6-phenyl-1-pyrenyl)- (CA INDEX NAME)



CAS Registry Number  
294881-28-0 CAPLUS

Chemical or Trade Name

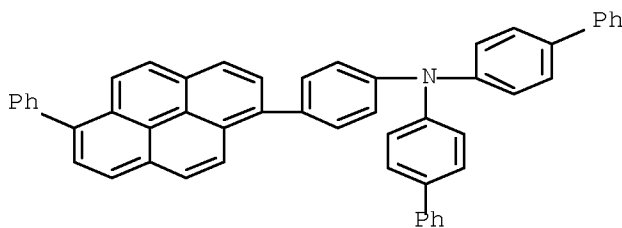
Benzenamine, N-(4-methylphenyl)-N-phenyl-4-(6-phenyl-1-pyrenyl)- (CA INDEX NAME)



CAS Registry Number  
294881-29-1 CAPLUS

Chemical or Trade Name

[1,1'-Biphenyl]-4-amine, N-([1,1'-biphenyl]-4-yl)-N-[4-(6-phenyl-1-pyrenyl)phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)

